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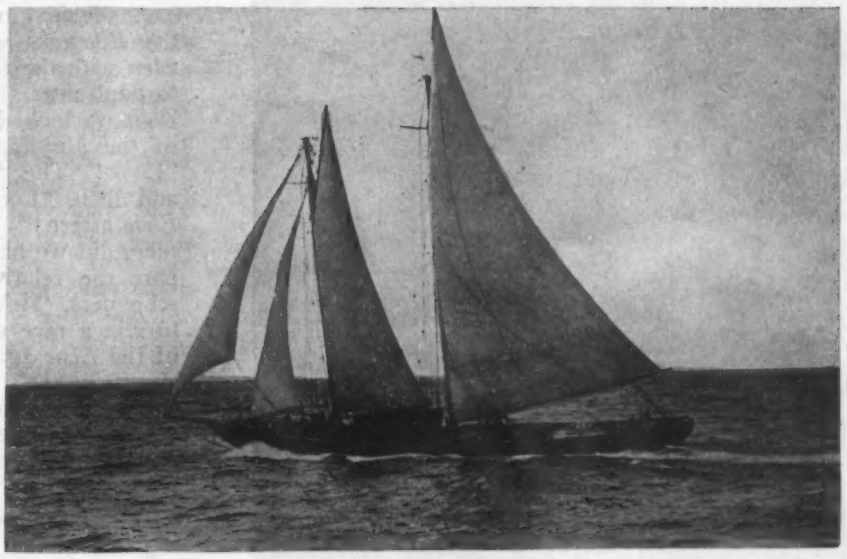


Mayflower, on her way to the Banks in winter rig with topmasts housed and dories nested on deck.

A Fishing Trip to the Western Banks on the Schooner Mayflower

By ROY W. PIGEON

ON Saturday, October 22, 1921, at 2:30 P. M., we hoisted sail on the *Mayflower* and started down the harbor from Boston, with a good breeze blowing from south by west. We traveled along at a fast clip. A motor boat from the Fish Pier hooked up with us to wish us *bon voyage* and test our speed. We soon left her behind and raced down by Deer Island Light with our four lower sails hard full. We hoped to reach Halifax, N. S., some 400 miles away, in time to see the race on Monday between the *Elsie* and the *Bluenose*. The betting on the Fish Pier was 10 to 8 that we would not reach Halifax in time for this race.

Our crew, 23 men all told, as they emerged from the cabin or fo'castle dressed for action, hardly looked like the same men who came aboard in their soft clothes just before we cast off. Strong, able men with stiff back bones, these fishermen, for no others could stand such a life.

We jibed over after passing Deer Island and headed for the Graves Light. The wind lightened somewhat here, which did not meet with our approval. We passed the Graves Light at 3:30 and laid our course, East by South. Threw the log at 4 P. M. At 6:30 P. M. the wind had increased to 20 miles. The log showed 35 miles at 7 P. M. At 5 P. M. the cook had announced supper and, needless to say, the first table lost no time in getting to work on some good pork chops, hot biscuits, boiled potatoes, tea, cake and pie. Let me say here that we had a fine cook and the food was the very best. Fishing crews thrive on good food and plenty of it.

The breeze increased and a large quartering sea followed us. Oilskins were in order as it was getting cold and the spray was flying. At 8 P. M. we heard something snap aloft and down came the throat of the mainsail. All hands were ordered on deck, flare torches were lighted, the mainsail was taken in, the boom lashed in the crutch and the sail tied up snugly. A watch was set then, two men to a watch, and we went below in the cabin where a good warm fire was burning in the stove. We stripped off our oilskins and spent an hour talking of the race between the *Elsie* and *Bluenose* and wondering if we would get there to see it on Monday.

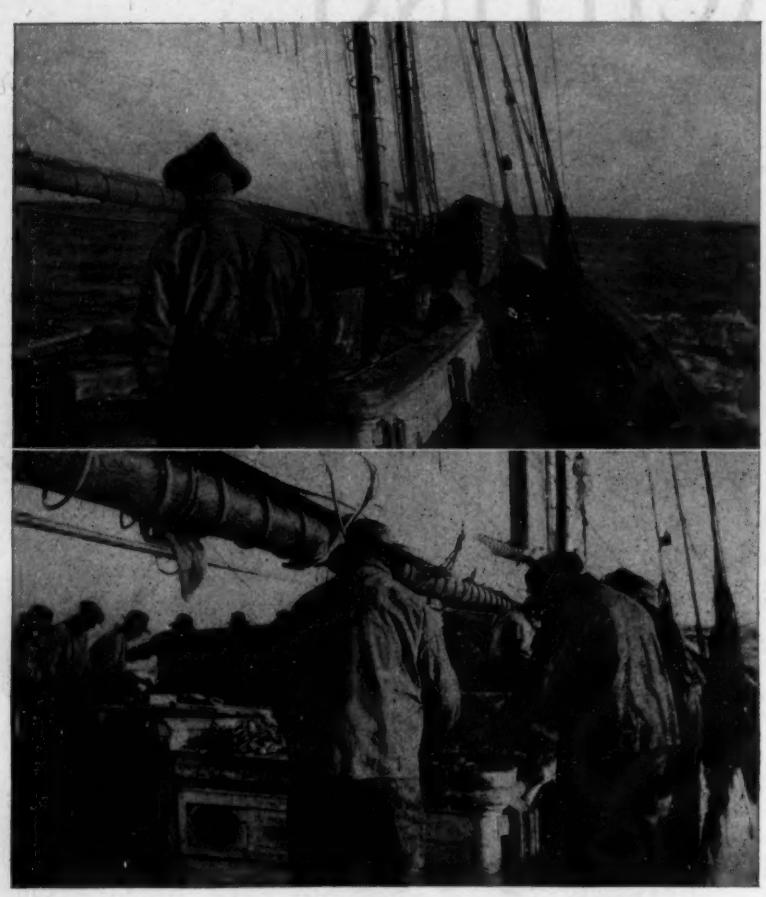
It aired up and at 9:30 we were making fine progress under foresail and two jibs. Turned in at 10 P. M. and although there was considerable noise about deck, had a good night's rest. After logging 100 miles our course was altered to East.

Sunday morning broke fair and clear, with a strong breeze from the Northwest. Amos went aloft at 8 A. M. to see why the mainsail had come down and repair the damage. He soon found the cause. One of the throat links, made of 1¼" iron, supposed to have a breaking strain of 72 tons, had opened in the weld; the blacksmith responsible for same had burned the iron in the weld. A new shackle was installed in place of the broken link, the throat block hoisted aloft in position, by which time it was blowing so hard that the riding sail was ordered hoisted.

An hour later found us scudding along with a 50-mile northwest wind under the riding sail, foresail and two jibs. A heavy, quartering sea was running and the flying spray, showing rainbow colors, made a wonderful sight as we glided on.

At noon we hauled the log and found we had covered 205 miles. Barring accident we were sure to reach Halifax in time for the race. At 2 P. M. we sighted a sail, the

Designed by Cox & Stevens and owned by Peter W. Rouse, of New York.



Six hours out from Halifax with a good sailing breeze.
Cutting bait on the Emerald Banks.

first we had seen since leaving home, a fishing schooner, bound to the westward on the wind and making very slow progress against the heavy head seas. The crew decided it was the *Robert & Arthur* of Boston.

At 2:30 P. M. we sighted land off Cape Sable and altered course to northeast. Sails were trimmed a little. The wind was still blowing very hard and we were bucking a strong head tide so we were making up under the land where soon we would be getting in smoother water.

Passed Brazil Buoy at 3:15 and decided to make a test as to just what speed we were making so took another log reading and at 4:15 the log was hauled and we found we were making 13.3 knots, which was a very good hour's run.

At sundown the breeze had decreased to 20 miles an hour. We were then off Little Hope Lighthouse. We ate supper in comfort, as it was much smoother as we neared the land. At 10 P. M. we were off Margaret's Bay where we encountered some very severe wind squalls blowing from 50 to 65 miles an hour. The jib was ordered in and triced up and we proceeded the rest of the way under riding sail, foresail and jumbo. The puffs were so heavy off Margaret's Bay that it seemed as if everything was being torn up by the roots.

At 2 A. M. Monday morning we lashed the wheel off the Sambro Buoy, just 34 hours from the Graves Light. Only four hours of the entire run did we have the mainsail set. For 13 hours we ran under foresail and jibs; for 14 hours we ran under riding sail, foresail and jibs, and for 3 hours we ran under riding sail, foresail and jumbo. Log reading from Graves to Sambro Buoy was 347 miles.

Monday broke fair and clear. The wind was light as we jogged in toward the harbor and it looked like a fine day for the race. A committee boat steamed by us about 8 o'clock and gave us a friendly wave. The crew of the *Mayflower* were keyed up with the excitement of the coming race but in their excitement there was a touch of disappointment on their faces, for they felt they should have been in the race.

Here they come! As we beat to windward to meet them they are nearing the automatic buoy turning mark, the *Elsie* 45 seconds in the lead. The *Bluenose* looks to be a little sheet bound and we wonder why she does not ease up her sheets a bit. The next mark is still to leeward, off Sambro Lightship Buoy. Here at times the *Bluenose* appears to be gaining and as they round the mark we find she has picked up 10 seconds.

At the next mark, still to leeward, the *Bluenose* was up very nearly even with the *Elsie* but was unable to haul clear. On the wind things begin to look different. The crew of the *Mayflower* suddenly shout, "Look! The *Bluenose* is ahead!" and then, "Look at her leave the *Elsie* astern!" Then, and not until then, did we have occasion to compare the relative size of the two schooners. How could anyone hope to win a race with a boat the size of the *Elsie* against one as large as the *Bluenose?* It looked to me like a case of double crossing all around. The *Mayflower* had surely been double crossed, and so apparently had the *Elsie*.

As the two schooners were coming out of the harbor and starting for the second mark, Harvey, one of our crew, suggested that we give them a little tryout. The skipper had no objections, so the *Mayflower* was put on the course with the racers and we started one-quarter mile astern of them and the same distance to leeward. Without any apparent effort to trim sheets, we were off. Enthusiasm ran high among the crew as they cried, "We are picking them up, boys!" For a time this was true, as we certainly did gain on the two slippery racers out ahead of us. As we progressed, however, the wind lightened and the racers with their light kites taking advantage of the puffs that came off the shore slowly begin to drop us astern until we had dropped back to relatively the same position we started from. The racers by this time were nearing the second turn and we were obliged to come up into the wind so as not to bother either of the boats on their next leeward leg. The Halifax papers came out in large letters, stating that they had beaten the *Elsie* and also the *Mayflower*. I agree with the papers—they did. When one considers, however, that we had 100,000 lbs. of excess ice and gear aboard the *Mayflower* and about 3,600 feet less sail area, it is not to be wondered at.

Beating up the harbor we fell in with the *Delawana* with a large party of *Bluenose* admirers aboard and with a band playing. They were certainly enjoying themselves. The Stars and Stripes had been hoisted at the peak of the *Mayflower* and as we ranged abreast the *Delawana* her band played the Star Spangled Banner and all hands on

board joined in giving three cheers for the *Mayflower,* to which our crew responded fittingly by giving three cheers for the *Bluenose.* We then had a race up the harbor with the *Delawana,* to windward, and in a short 3-mile beat, we left her cheerful company 10 minutes astern.

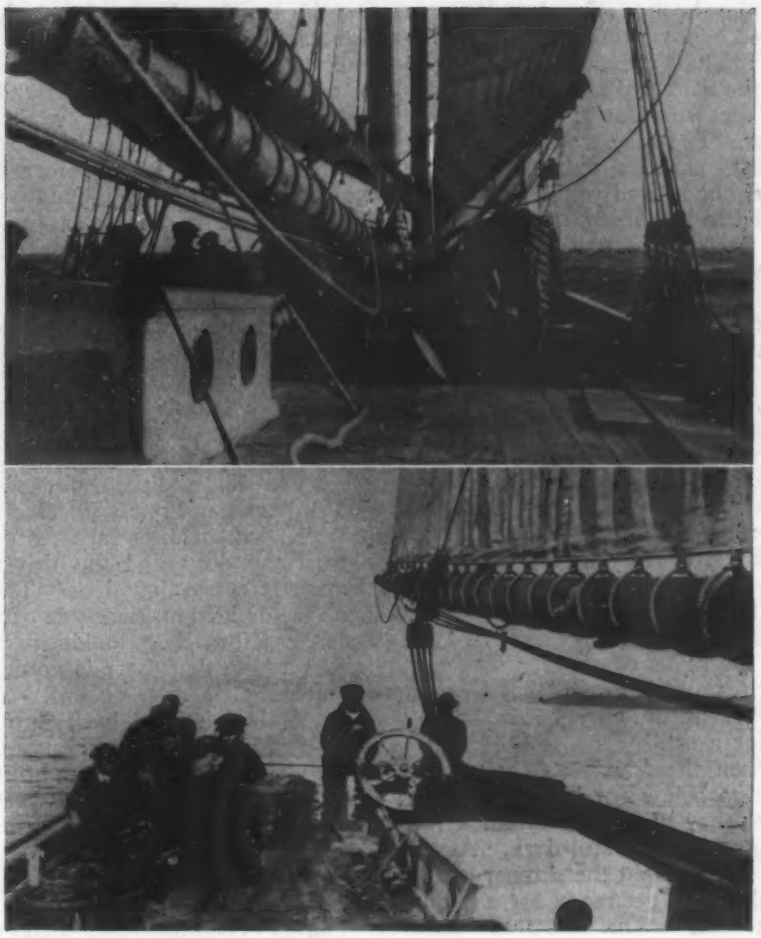
It was rumored that the *Mayflower* was coming up the harbor so the Halifax people were greatly interested. However, they were greatly disappointed at her looks, as many remarked when they saw her coming in with topmasts down that "that old hooker never was the *Mayflower;* that her stern looked like a wood-boat." So our appearance was rather a shock to the people gathered on the docks.

We anchored in mid-stream and Captain Larkin went ashore and made arrangements to dock the *Mayflower,* as we wanted all in Halifax who desired to do so to come on board and inspect her. A towboat was secured and the *Mayflower* was docked and large numbers came on board, most of whom expressed themselves as being greatly surprised and astonished at her heavy construction, "so different from what they expected to see," they said, and added, "why had she been barred from the race?"

Once ashore we met many Gloucesterites, who said there would have been a different story to tell if the *Mayflower* had raced. We met many reporters as well as some of the Gloucester people, who acknowledged that they had made a mistake in barring the Boston boat. And let me say here that the *Bluenose* and *Mayflower* are both able fishermen, but if the term yacht could be applied to either one, it would be to the *Bluenose.*

Tuesday was visiting day aboard the *Mayflower,* as a strong northeast gale of wind was blowing outside and Captain Larkin decided to remain in port. Wednesday morning conditions still did not permit us to go to sea and storm warnings were set. But by Thursday conditions changed; a warm sun was shining and the crew was chafing to get to sea. As soon as the custom house was open and the clearance papers stamped, the towboat came alongside and pulled us into the stream, where we hoisted our four lower sails and were off for the fishing grounds.

The wind was so light that we hardly had steerage way. The schooner *Goodluck,* from Gloucester, was waiting down the stream under power and slipped us a friendly line and towed us at least



Too heavy a breeze to fish.
Part of the crew gathered aft.

6 miles to sea, when we picked up a light west-southwest breeze. Soon we were running up on the towline and were obliged to cast off. The skipper thanked Captain Moreash of the *Goodluck* for his tow and we sailed off and left the latter behind in short order. This seems rather a tough thing to do, but we had no alternative, and at 3 P. M. the *Goodluck* was 8 miles astern. At 4:30 we were not able to find her with the glasses.

At 8:45 we took soundings and found we were in 38 fathoms, the log read 66 miles, and we knew we had arrived at Emerald Banks. A 14-pound sounding lead is used, well soaked at the bottom to indicate the nature of the ground. Many a superstition hangs on the lead and line. Some skippers want to be the first to see the lead when hauled over the side and should any member of the crew look at it before passing it to the skipper, a change of grounds is ordered at once. Fortunately Capt. Larkin did not feel that way so we all took a look as it came over the side to see what the bottom was like. The wheel was lashed and we jogged across Emerald Banks all night. Trawls were overhauled, bait knives sharpened up, flare torches made ready, filled with oil and new wicks, dory sails, anchors and lines were made ready for the first set on the morrow. Then all hands, save the watch, turned in for a good night's rest.

Friday morning, about 4 A. M., a loud shout from the skipper, "Bait up!" brought everyone up with a start. I don't know whether or not the skipper sat up to shout this, but he was on the job and soon there was great activity on deck. Twenty men in oilskins and rubber boots, with flare torches lit, were busily engaged in hoisting frozen squid out of the hold and distributing them in bushel baskets along the top of the cabin where the bait boards were installed for cutting bait.

"Two tubs!" the skipper ordered, and soon the cutting of bait was on full swing. Rather a weird sight! One could imagine by the bright light of the torches that he was overlooking a stall at some beach resorts where vendors were selling hot dogs. The slash of 20 knives sounded like a cooper shop in full swing as the crew cut bait. The bait fell into a box in small pieces, ready

for the hook. The trawls were turned over on top of the cabin beside the bait and the crew began to bait the hooks. Past masters at this art, the bait fairly flew onto the hooks. The race was on, a baiting contest, perhaps unknown to the crew, but as one watched they appeared to be baiting faster and faster, each to outdo his neighbor. Jerry, a big, good-natured, powerful fellow, won the contest by half a tub. There are about 560 hooks to a tub of trawls. Beyond the flare of the torches it is inky blackness, large waves with white caps disturb the busy scene on deck and one wonders if it will be possible to launch dories and fish. The skipper voiced some doubt of this when he ordered two tubs baited instead of three, the usual set on a good day. A mile to port we discovered the flare torches of the schooner *Goodluck* and on the starboard we saw the lights of another schooner, which proved to be the *Herbert Parker,* busily engaged in baiting up for a set.

When the trawls are baited the crew go below for breakfast, after which they turn in again for a few minutes, as it is still dark. At the first sign of light the skipper orders the dories to get ready for a double bank set. The weather looks threatening, the wind is blowing fresh and the glass does not look encouraging. A double bank set is quicker and safer under these conditions and so the lowering of dories, one from each side, was commenced with considerable care, for it is rather difficult work lowering in a heavy wind and full sea, as they would be smashed to pieces if not handled properly.

It takes 25 minutes to make a double bank set with 20 dories. Once the dories were over one would think the skipper could relax and rest a bit, but that is not the case, for his worries are just commencing and he is a bunch of nerves until the dories are safely nested on deck again, for many a man has been lost on the banks by the rising of a sudden storm or the shutting in of a thick fog, either of which is very apt to happen in a very few minutes on the Banks at this time of year. So the skipper watches every change in the sky and every movement of the glass as he paces nervously across the deck.

On board with the skipper are the cook and a spare hand and it is up to them to handle the schooner. One hour elapses from the time the dories have all been lowered and then the signal is given by blowing the fog horn to start hauling the trawls. From each end of the trawls the husky crew begin to pull. The schooner is run to leeward of the dories so that after the boys have hauled their trawls they can put up their small sails and sail down to the schooner before the wind. A dory is equipped with oars and sails, a bucket, a jug of water and a compass. Some 2,000 fish can be put into the bottom of these dories in good weather.

In a short time we notice the sails being put up in the dories and they start to leeward towards us with their haul. As they near the schooner they take down the sails and row alongside, each to his respective side, and the cook, bo'sun and skipper stand ready to catch the painter. Pitchforks are thrown aboard the dory and the fish are thrown into pens on deck. These pens are divided on each side of the schooner for cod, haddock and mixed fish so that there is no delay in pitching the fish aboard. The dory is then hoisted back into its nest and another dory takes its place along side, and so on until the 20 dories are nested and lashed down in position. The skipper then draws a long breath and relaxes. His worries are over for the time being.

Dinner is announced and the crew lose no time in taking advantage of the meal. The first set did not amount to more than 8,000 lbs. so the skipper decides to change the grounds to the eastward, to the Western or Sable Island Banks. As soon as the crew come up from dinner the fish are dressed, washed and sent below to be iced up.

At 2 P. M. the weather looked bad. The mainsail is ordered down and a single reef tucked in. So twenty busy hands get to work and soon the reef is neatly tied. By this time the wind has increased so that the skipper decides not to hoist the mainsail at all, and it is secured up for the night.

At 10 P. M. the wind commenced to breeze from west-northwest and the sea got rougher and rougher. The jumbo was ordered lowered and we sailed along under foresail until 4 A. M. when the wind began to screech and we were in the midst of a 75-mile gale. The wheel was lashed and we jogged in the direction of Sable Island.

At 1:30 soundings were taken and we found we were nearing Sable Island bar where the *Esperanto* and many other staunch, able ships have laid their bones. Orders were given to tack ship, the wheel was released, the schooner kept off to get good headway and an attempt was made to tack. We were met by three tremendous seas, one after the other, which smashed into our bows and killed our headway so that we kept off again to gather headway and another equally unsuccessful attempt was made, as the ever-increasing sea would meet us and check our efforts.

"Well," said Larkin, "we will try again and if we fail, we will jibe." So off again he swung and back he came with a little more speed, as he carefully looked to windward for a chance when the seas were a little less. Then he swung the wheel again and we turned our nose back into the heavy seas, into the eye of the wind. We hovered and shook for a while and the crew kept saying "Has she the legs to go?" Hard down goes the wheel, we pause and hold our breath, some one shouts, "She's over!" He is right, the foresail catches a full from the other side and we gradually pull away from the dreaded Sable Island bar. The wheel is again lashed and we go below, duly thankful that we are heading again in the right direction.

The *Mayflower* was trimmed by the head badly, which accounts for the three attempts we made before we were able to tack. A terrible, monotonous day was this and one full of worries for fear something might break; at least it was so to me. We struggled on through the gale. The wind shrieked and we could hear it coming a quarter of a mile away. As it hit it forced us down through tons of water which poured over our lee rail and at the same time a heavy sea would hit us to windward and break over us with a noise like the discharge of a broadside of heavy guns. Then the water would run off the deck and the schooner would shake herself free like a dog just out of the water and surge forward for another deluge.

I was thankful I had seen the *Mayflower* built, timber by timber, as it gave me a great deal of confidence. Night shut in and the gale did not abate in the least and so we turned in our bunks, imagining that we might, perhaps, get some sleep. My bunk on the leeward side was under water all night long and the heavy crash of the seas as they hit broadside to windward did not give me much chance to sleep. The skipper was on deck at any unexpected sound and I think he hardly slept that night.

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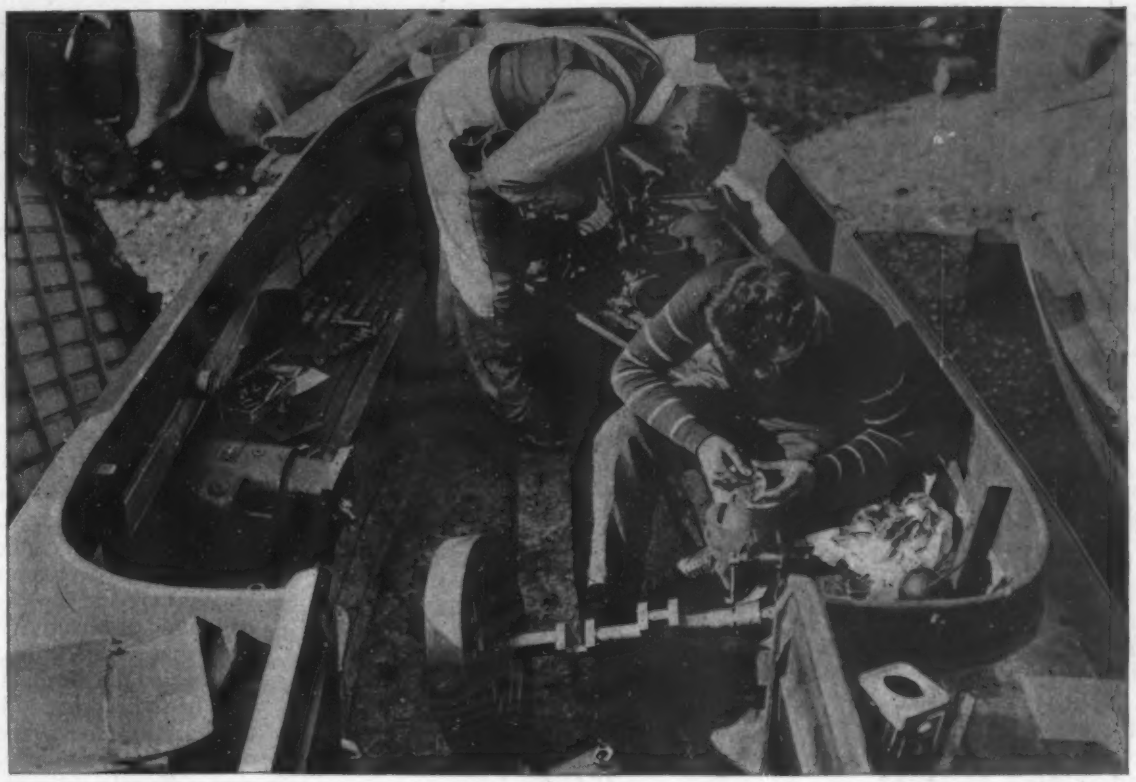


Doing a thorough job. It isn't always necessary to take an engine down each season, but when it is done every part should be thoroughly cleaned.

Fitting-Out Time

Some Hints on the Spring Overhaul

THIS article isn't for the man who has been through the mill and has put his yacht in commission with his own hands from the time he owned his first small boat. Those whose inclination or whose bank accounts have impelled them to do the work themselves are by this time adepts at the job and probably know as much about how the work should be done as the writer of this article.

But each year there are a number of new comers who are putting their boats in commission for the first time, and this is the season of the year when they expect to get the information they want from their favorite magazine. Therefore, it is up to said favorite magazine to give them some points on doing the work and to tell them not only how it should be done, but the best methods of doing it. And by that same token some of the older hands may find here something that may be of value in lightening the work or in showing better ways of doing parts of the job than they have used in the past, for no one knows all there is to know about boats, or about taking care of them, and the man that cannot learn something each year he fits out and each time he goes sailing is certainly a *rara avis*. Therefore, with this brief apology let us get down to brass tacks.

The first job to tackle is, of course, cleaning the boat out thoroughly inside and smoothing her off outside, ready to start the painting, scraping and other work. If the boat is a power boat or has an engine in her, it is always wise to get the engine overhauled before starting to paint and scrape, as the former is a dirty job and if left until after the boat is painted you are going to muss things up badly. Many men overhaul their engines during the winter, so that when the good weather comes they can begin on the more congenial work of painting, scraping and varnishing.

Another point to remember is, always to start at the top and work down. There is one exception to this, in that, if the boat has to be burned off on the outside, this can be done early in the Spring before starting on scraping the spars or bright work on deck.

The first thing to do is to get the cover off on a bright, sunny day, open up everything and let the boat air out thoroughly. If there is any grease in the bilge, hot water and soda should be applied with a scrubbing brush, mixed with plenty of elbow grease. At the same time the limbers should be cleaned carefully, the bilge pump taken apart and overhauled and its suction pipe and strainer cleaned. Any little repair jobs should be done at this time and a screw or a nail here and there will save trouble later on. Possibly a plank must be renewed or a graving piece set in. When this is done, clean her off thoroughly and go over the caulking, particularly the garboard seam and around the hood ends on stem and stern post. Also, look over the rudder port and centerboard trunk.

Caulking

In examining the caulking if it is in good shape, leave it alone, but if the cotton is rotten, dig it out and drive in new. On a small boat it may be rolled into the seams with a wheel made for the purpose; on a larger one it must be driven in with a caulking iron. Do not drive the cotton through too far or put in too much, as the planks will swell when the boat goes overboard. The caulking should never be driven all the way through a seam, but merely far enough below the surface to take the putty properly. If the seam is wide, first "tack" the cotton along it in short loops; then go over the seam again and drive the

caulking in with iron and mallet. At this time the edges of any planks that have been bruised or curled up should be planed off and sandpapered. After caulking, paint the seam with thick white lead paint, using a seam brush, and putty it with good white lead putty. Sometimes a boat's planking shrinks during the winter, and she will leak like a sieve for the first day or so, but will then become tight as the planks swell. If the seams are filled up with cotton it will be squeezed out and make an unsightly job. An old dodge for keeping such a boat tight when first launched was to fill the seams with common brown soap. By the time this is dissolved the planking will be swelled up and the seams become tight.

Varnishing

There will be a lot of scraping and varnishing to do if the bright work is in bad condition. If it is in good shape sandpapering will do instead of scraping. If the varnish is in bad condition, discolored, thin and worn off in spots, it had better be scraped. For this purpose the cabinet scraper is used, and for the painted surfaces a file scraper. A triangular boat scraper is not recommended, as a slight turn of the wrist will dig the point into the wood. Much labor may be saved by using plenty of varnish remover, which is put on, left for a short time and then washed off. Some of these take the varnish with them; others merely soften it so that it peels off easily under the scraper.

You had better watch the weather, and do not get too much varnish off, leaving the wood unprotected in case of a shower. Do not try to paint or varnish in wet or threatening weather. Use a good beveled edge varnish brush from 2 to 3 inches wide, and be sure to get spar varnish for all outside work, as house or interior varnish would be worse than useless. Hard wood must not be left unprotected, particularly oak, as it turns black if exposed to the weather.

Painting

In preparing to paint go over the work inside and out, remembering that often a good washing is as good as a coat of paint. Never paint over dirt. In painting the outside of the boat work from the top down; that is, do the cabin top and work about deck first, then the topsides, and lastly the bottom. If the bottom is painted first, the paint from the topsides will run down over it and make unsightly streaks.

If the paint on the topsides is in good shape go over it and touch up any holes, sandpapering the edges of the old paint down smooth. If it is blistered it had better be all taken off. Paint remover may be used or it may be burned off; that is, softened with a gasolene blow torch and scraped with a file scraper.

Now comes the painting. Two coats will be enough if the boat has not been burned off; if she has, three, or preferably four coats will be necessary. Use nothing but marine paint or enamel of good quality, and don't be afraid to pay a decent price for it. The ready-mixed paints sold for this purpose are most of them better than you can mix yourself and are almost universally used.

Getting on the job

For the bare wood the first coat should have a good deal of linseed oil in it. When this is dry, all cracks, dents and nail holes should be puttied. After this it is well to rub down with sandpaper, working with the grain of the planking. The next three coats have less oil and the last one sometimes has a percentage of zinc. This gives a brilliant white, but is not as durable as lead. In every case brush out the paint thoroughly so that it will spread well, and no brush marks must be left.

There are marine enamel paints on the market which make an excellent finish, last well, and from which dirt is easily washed. If two coats of enamel are applied plenty of time should be allowed between them for the first coat to dry.

Good brushes will be necessary. They should be prepared before use by soaking in linseed oil overnight, then dipping in paint and working back and forth over the edge of a board to get rid of any loose hairs.

The bottom should be painted with a good brand of copper paint. This costs anywhere up to $12 a gallon for the special brands, and the best brands have marked nonfouling qualities and keep the bottom of the boat free from marine growth.

The Standing Rigging

The standing rigging should be gone over with care, looking particularly at the splices. If the rawhide covering is worn put on new and look for rust and signs of weakness wherever there is a splice. Examine also the shrouds at the eyes of the rigging to be sure they are in good shape. The bobstay is particularly apt to rust. Turnbuckles must be gone over, cleaned, greased and renewed if necessary. A rusty iron turnbuckle is almost sure to stick, and may be twisted off when setting up the rigging.

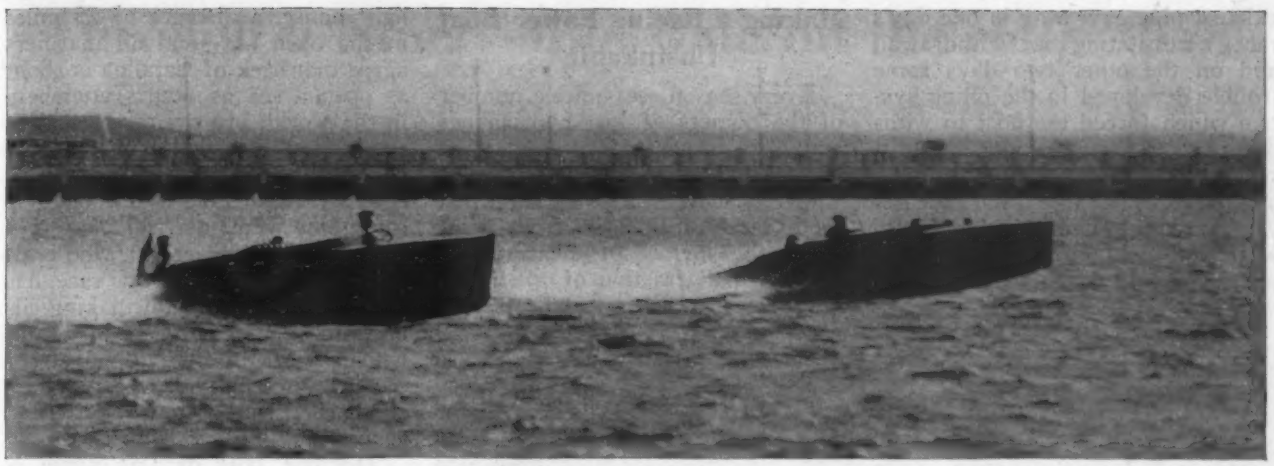
Overhauling the Engine

When you come to the engine, which is a job distinctive from the boat itself, every part should be cleaned thoroughly and carefully adjusted before the boat goes overboard. If it is necessary to take the engine down it is a good plan to strip it of its accessories, such as magneto, carburetor, ignition system, etc., looking over each carefully.

If the engine has a removable head the piston can be removed and the cylinder cleaned by taking off the head and the hand-hole plate in the base, where the connecting rod may be disconnected, and the piston taken out through the top; but with a solid head cylinder, whether cast singly or *en bloc*, the cylinders must be disconnected from the base and lifted off to get at the piston and connecting rod. If the engine is a large one this may mean a pair of sheer legs and a block and tackle or a chain hoist to lift them.

Be methodical in every stage of the work or you may get into trouble when you reassemble. Mark each cylinder and its position on the base, and also each piston so that

(*Continued on page* 248)



They're off at Miami! Start of race for the Wood-Fisher Trophy. Left, *Baby Car*, owned by G. A. Wood, and *Adieu*, Webb Jay.

Mooring Equipment

By C. D. Davis

WHAT boat owner has not, some time or other, passed a sleepless night waiting for morning to come, fearing that his boat may be pounding on the rocks after a heavy storm? Had there been a good heavy mushroom anchor biting the ground at the end of his mooring, perhaps his fears would not have been justified, or else he would have had no cause to worry whatever.

A heavy mushroom anchor makes as good a permanent mooring as can be obtained either for protected or unprotected waters. Not only for its holding power is this true, but for convenience of handling, hauling out and stowing away for the winter. It is very easily moved, is not difficult to get to shore, or to haul out on land. It will hold the average boat as long as the rope or chain will stay together and it adapts itself to almost any bottom.

A heavy block of granite, or concrete, to which a ring bolt is securely attached unquestionably gives excellent holding power. But either of these is clumsy and difficult to manipulate and to place properly on account of the bulk. If it becomes necessary to renew the mooring chain or rope, it may be necessary to go to a great deal of trouble to get together the proper equipment to handle so big an object, and usually a specially built scow fitted with a winch must be used.

The ordinary black iron straight shank mushroom anchor is usually sufficient, but a bulb shank anchor is even better, and if one cares to go to the expense of buying a galvanized anchor, it is well worth the slight difference in price in the long run, for there is less chance of the parts corroding and giving way.

As for arrangement, one of the most convenient rigs consists of a stout chain about 30 feet long, depending, of course, on the depth of water, the scope wanted, etc., attached to the anchor. Make an eye splice of a stout manila line about 30 feet long around a good sized galvanized thimble. Shackle this to the chain, the other end being made fast to the boat. Into this mooring line, about 15 feet from the boat end, splice a light line 25 or 30 feet long and to its free end attach a light wooden or can buoy large enough to support the weight of the large rope. When the boat is at her mooring simply stow the can or buoy on deck so it will not roll around. There is then no buoy or spar to chafe the side of the boat. When leaving the mooring you have only to cast loose and heave all overboard. After the day's trip there is no heavy keg or log buoy to bump into, and the light buoy is easily fished up with a boat hook.

The weight of the chain makes for easy riding in heavy weather, with a minimum amount of jerking. The chain itself precludes any possibility of chafing or cutting on a rocky bottom, which may easily happen to a manila cable that reached to the anchor proper. The writer has kept a boat on this kind of a mooring for several seasons in a fairly well exposed New England harbor, especially to heavy northeasters, and always found it most satisfactory, besides being easy to leave and easy to make up to.

No exact measurements as to length of chain, rope, etc., are attempted here, as all those depend entirely on the depth of water, harbor room, etc. The longer scope you can give the boat, the easier she will ride. Three times the depth of the water is the least that is advised, 4 or five times if there is room to swing to this length.

An Unsatisfactory Regatta at Miami

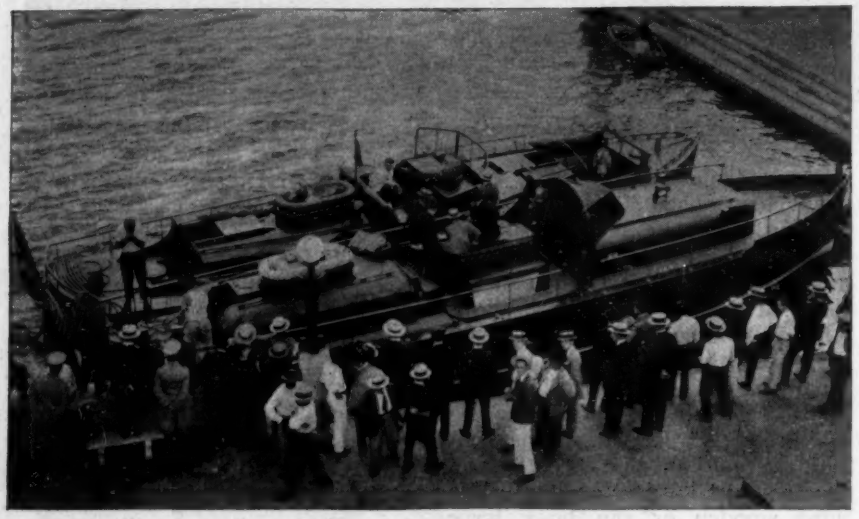
CONTRARY to precedent, the races for the Wood-Fisher trophy and the Fisher-Allison trophy at Miami, scheduled for the early part of March, proved a fizzle and practically resulted in no racing at all.

In the first place, entries were very scarce for both of these events, only three boats being down at Biscayne Bay ready and willing to go over the course. In the first event, which was scheduled for March 2d, and was for the Fisher-Allison trophy, that cup which has been the cause of so many heart breaking races in the past few years, only the *Aye Aye Sir II*, owned by Carl G. Fisher, and *Adieu*, owned by Webb Jay, and the winner of last year's contest at Miami, were scheduled to start. Just before the race *Aye Aye Sir II*, while tuning up, broke her shaft and the propeller apparently tore a hole in the bottom of the boat causing her to sink, so that "the subsequent proceedings interested her no more," and the trophy was awarded to Webb Jay and the *Adieu*. Mr. Jay is too much of a sportsman to care about winning a race under these circumstances, but he had to take the trophy, nevertheless.

As this series was called off, the race for the Wood-Fisher trophy was immediately scheduled. Although *Adieu* was not entered in this event, the terms of which allowed aeroplane motors, with which *Baby Car*, the other entry, was equipped, Mr. Jay agreed to enter his boat, even though he realized that he had no show of winning against the much higher powered runabout.

However, three heats of this race were run. These proved disastrous for the little *Adieu*, as a weld in the

exhaust pipe gave way in one day's race, necessitating her withdrawal, and on the other two days some trouble developed in the oiling system which forced the boat to withdraw. This was an unusual proceeding for this boat, after the sterling performance which she gave last year, when the engine ran like clockwork and without a falter. The present engine is not the same that was then in the boat, being an 8-cylinder in place of the 6-cylinder Hall-Scott with which she raced last year.



The express cruisers at Havana after the finish of their 240-mile race from Miami. *Gar Jr. II* in foreground. *Shadow V* outside of her

Baby Gar's time for the three heats of 50 miles each were—first race, 1 hour, 23 minutes, 14 seconds; second race, 1 hour, 14 minutes, 53 seconds, while the third race was ended by the officials after the 13th lap, when *Adieu* withdrew. *Baby Gar* is owned by "Gar" Wood.

There were several cruiser races scheduled before these events were run off, but as there was nothing that could give *Gar, Jr. II,* "Gar" Wood's express cruiser, a good run, they were not very interesting. The best of the lot was a three-cornered race from Miami to Havana, a distance of 240 miles, from there back to Key West and from Key West back to Miami.

The only other starter was Carl Fisher's old *Shadow V,* which could not make within miles of the speed of the *Gar Jr. II.* On the first leg *Gar Jr.* made the 240 miles in 9 hours 23 minutes; her time from Havana to Key West was 3 hours 57 minutes 32 seconds, and from Key West to Miami, 154 miles, was made in 5 hours 11 minutes and 30 seconds.

Making a Racing Power Boat Unsinkable

Every season sees quite a number of the owners of fast hydroplanes and displacement racers join what is known as the Ancient Order of The Hell Divers Association when their racers disappear from sight under the surface of the water in a very small fraction of a fifth of one second. Still other boats sink from structural weakness, collision or from striking comparatively small pieces of drift wood. Then there is always danger that a broken propeller may come through the bottom of a light boat or that a flywheel or some other portion of the engine's interior anatomy may take a sudden notion to go out the same way. The results are usually the same—a costly and valuable craft goes to the bottom and its occupants are left to the tender mercies of an unnatural element. This is all very well in shallow water when other craft are in the neighborhood, but at other times it might become very serious. For this reason, the California racer *Mystery,* built at Los Angeles for Frank A. Garbutt, presents some features that will bear close study by all power boat racing men and builders.

Now, Frank Garbutt uses his *Mystery* (there have been a number of them) to defend the Santa Catalina Perpetual Challenge Trophy which is one of the hardest and most sporting motor boat races in the world.

The race starts at 7 A. M. of the date set, regardless of weather conditions, and the course is from the light house at San Pedro, around Catalina Island and back to the light house, a distance of 75 miles in the open sea—and all mariners agree that back of Catalina is about as open a sea as occurs anywhere in the world. In event of accident some other boat might pick up the derelict in a few hours, or then again it might take a few days, if conditions were just right.

Naturally Mr. Garbutt, who is always ready to take on this race, has spent some thought on making his boat unsinkable at a cost in weight which is not prohibitive, and every one of his *Mysteries* has been equipped with some provision against sinking.

The last boat of this name is built with four reinforced watertight bulkheads made of three-eighths ply wood manufactured by the New Jersey Veneer Company. This wood is made up of seven thicknesses of veneer laid up in waterproof glue. Mr. Garbutt tested this wood by soaking the unprotected veneer in salt water for thirty days and by boiling for hours, and found no sign of the glue failing. The two engines of *Mystery,* of 450 H.P. each, are between two of these bulkheads and both the bow and the stern are cut off from the rest of the boat by watertight bulkheads, making five compartments in all.

In event of collision or serious structural failure, however, these watertight compartments are not entirely depended upon, to keep *Mystery* afloat. She is equipped in addition with a hundred airtight compartments made out of balloon fabric. These compartments or bags are of various shapes and sizes to fit into odd places in the boat and occupy no otherwise valuable space. They range in size from a cube of sixteen inches to as small as six by six by twelve inches. They average about a cubic foot each, with an available net buoyancy of about sixty-two pounds per cubic foot in sea water. They are strong enough to stand up when completely submerged.

The total installation is extremely light and weighs about 85 pounds, being the lightest non-sinkable device we know of. Any portion, or all of it, may be carried and it is hard to conceive of any accident, except fire, that would cause the boat to sink.

These balloon fabric air-tight bags would seem to afford a feasible way of protecting the fastest and lightest boats from sinking. A light boat may weigh in the neighborhood of 2,000 pounds. The hull, weighing, say, 500 pounds, would float itself.

(*Continued on page* 248)

Through a Ninety-Mile Gale on the *Half Moon*

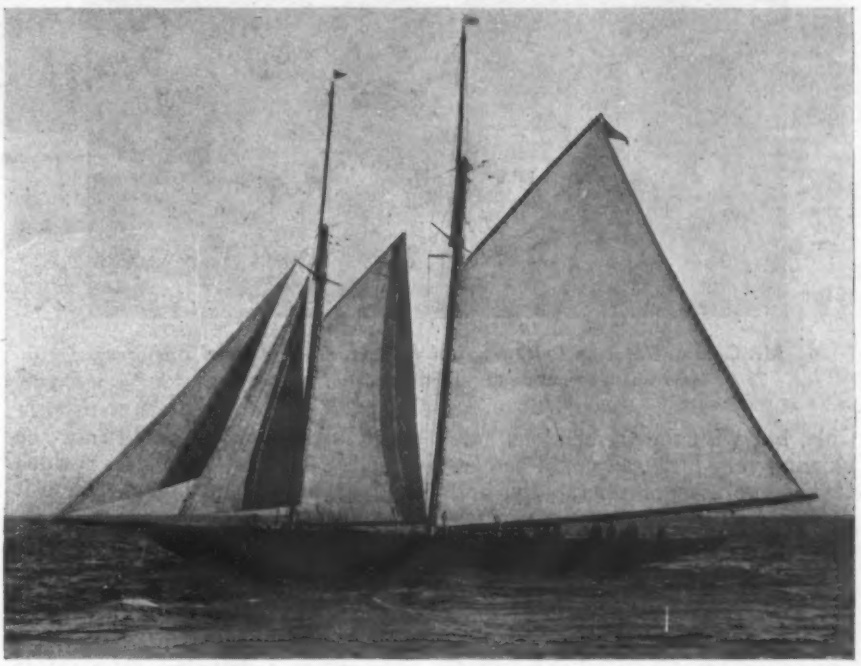
YACHTING on the Western Ocean in the Winter isn't all white duck pants and yachting shoes, not by a long shot, and if any of you don't believe it just ask one of the after guard or crew of the big schooner yacht *Half Moon*, which ran into a little breeze of wind in January while on a passage from New York to Hampton Roads, on what was expected to be the first leg of a trans-Atlantic voyage to the Mediterranean.

The *Half Moon*, as most everyone knows, was formerly the schooner yacht *Germania*, built by the Krupps in 1908 for racing in German waters and was at one time the property of the former German Emperor, Wilhelm II. She was unfortunate enough to be in an English port when war broke out in 1914, was sold by the British Government and came to this country as the property of Christoffer Hennevig. More recently she became the property of Mr. Gordon Woodbury, at one time Assistant Secretary of the Navy. Mr. Woodbury had her fitted out at the Greenport Basin & Construction Co. yard for this cruise and late in January she sailed for Hampton Roads in command of Captain Swanson. Among those in the after guard, besides the owner, his two sons and one of his son's friends, Hugh Griffiths, were Charles F. Adams of Boston, John Jameson and James W. Hussey, of the Greenport Basin & Construction Co. There were others, but they don't figure in the story.

The *Half Moon* is a big, husky vessel, 107 feet on the waterline, 27 feet beam drawing some 18 feet of water, with all her ballast outside, and she carried her full racing rig, which, by the way, is hardly the thing for a trans-Atlantic voyage in winter, with a 90-foot solid main boom and a nose pole some 30 feet outboard.

Leaving Scotland Light Vessel, off Sandy Hook, on a Thursday afternoon, the yacht slid down the coast before a light Northeaster at a 7-knot clip, which was gradually increased to nine, ten and eleven knots as the breeze freshened on Friday. In the afternoon of the latter day, just before supper time, while the after guard were below, a wicked squall struck in, butt-end-first, and blew harder than "the hobbes of Hades," bringing everybody on deck in a hurry.

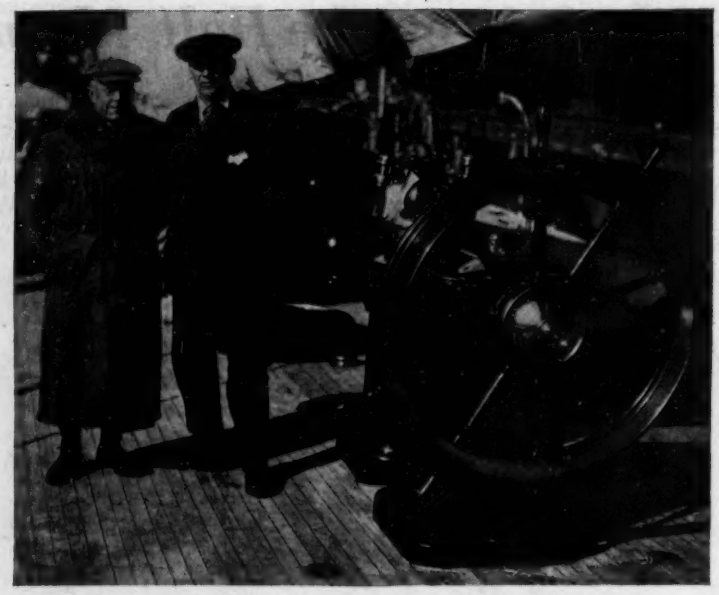
Fortunately the big mainsail had been gotten in and secured before this happened, as the boom had been wiping the tops of the waves as the sea made up during the afternoon. If she had been caught with that up something would have happened, then and there. What with the wind, driving rain and spume from the sea tops driving across the deck nothing could be seen more than 100 feet in any direction, and as the gale gave every indication of holding, Captain Swanson didn't dare run for the Virginia Capes under the conditions, the vessel being then about 20 miles Northeast of Cape Charles Lightship. So he decided to work off shore to the Southeast to get sea room. Sail was shortened, a storm trisail set on the main and everything snugged down as well as pos-



The *Half Moon*, formerly the *Germania*, at one time owned by the German Emperor, as she looked when leaving New York. Her racing rig with its 90-foot main boom and 30-foot bowsprit was hardly the thing for a Western Ocean voyage in Winter.

Two connecting staterooms of the *Half Moon*.

The smoking and card room with pictures of Heligoland still on the bulkhead.



Mr. Gordon Woodbury (left) owner of *Half Moon*, and Charles F. Adams, who was his guest on the eventful trip to Hampton Roads.

sible, but with the tremendous gale blowing very little sail could be carried. The sea got up rapidly, and during the night both the storm trisail (a new sail) and fore-staysail blew out, whipping to ribbons, leaving the yacht practically helpless. That first night the seas washing over her carried away the binnacle and standard compass, smashed the launch against the skylight and battered two of the boats to kindling wood. One particularly big sea washed four men from the pump into the lee rigging where three of them fetched up, but the quartermaster went overboard and was never seen again.

The wind gradually hauled into the Sou'west and when it got there it really began to blow. It's force was nothing short of 90 miles an hour, the seas being tremendous, washing clean across the deck, smashing under the long overhangs and shaking the ship from stem to stern. The two men at the wheel and the watch on deck had to lash themselves fast to keep from being washed overboard.

Saturday forenoon it eased up a bit, only to come on in the afternoon and blow harder than ever. The foretopmast carried away as the rigging slacked up with the violent motion of the ship, but was cleared away before dark. Just before midnight the bowsprit, with the jib furled upon it, broke off short at the gammon irons as she plunged her sharp nose into the seas, and hung alongside by the bobstay and bowsprit shrouds all night, threatening to poke a hole in the side at each plunge and to smash in some of the glass ports, many of the iron shutters of which could not be closed. Luckily, it did no serious damage, and when daylight came it was finally cleared away.

All this time no accurate account could be kept of the ship's position, as the spare compass which was rigged up had not been compensated and no lights could be kept burning in its binnacle; also, no sights had been possible. They were in the Gulf Stream, (they could tell this by the warmth of the water) but just where they did not know. On the second day, Sunday, things began to ease up and conditions got better, though the sea was still tremendous. Another staysail was bent and set, and a makeshift trisail was made from the foretopsail and gotten on her, and they headed up Northeast. Sometime that night an Hawaiian-American steamer hove in sight, the crew of the *Half Moon* burned a flare, and she bore down and lay to near them for four hours, it being too rough to get a line aboard the *Half Moon*, as the latter's skipper requested. After four hours this vessel left without a word, much to the disgust of the crew of the *Half Moon*, but evidently not until she had gotten in touch with a Standard Oil tanker by radio, for soon after the tanker *Japan Arrow* hove in sight, a line was finally passed to the yacht and she was taken in tow for Hampton Roads, her position then being about 45 miles East by North of Cape Henry, where they arrived later without incident, but thoroughly tired out.

The crew stated that with all their ballast outside, the motion of the yacht was so violent that it would jerk one out of his berth or chair and there was no chance to get any rest or any food for the two days of the gale. One can get an idea of the conditions against which the crew fought when it is stated that the levers of the windlass forward were twisted and laid along the deck like tissue paper by the seas, that the light boards in the fore rigging were splintered and torn loose, and practically all the ratlins on the main shrouds were blown loose and turned into Irish pennants. It was "some breeze," all right.

A Record Passage to the West Coast

What is thought to be a record passage by a sailing yacht, or sailing vessel of any kind, from Philadelphia to the Panama Canal and thence up the West coast to Santa Barbara, was made by the little schooner yacht *Haida* recently purchased by Maj. Max Fleischmann. This little schooner is 66 feet long in the water and is rigged as a three-masted "bald-headed" schooner. She was designed by Bowes and Mower.

The passage from Overfalls Lightship, at the mouth of the Delaware, to Colon was made in 10 days 9 hours. As the distance is about 1,900 miles this is extraordinary speed for a vessel of that size. After the passage of the Canal and a few days' stop in the Canal Zone, the passage from Panama to Santa Barbara was made in one jump, the time being about 23 days. The vessel was in command of Captain Rodstrom. With him on the trip was Ernest Ratsey, son of George E. Ratsey, of City Island.

The story recording this unusual voyage will appear shortly in YACHTING.

A New Cup For the "Q" Class In Chicago

Through the efforts of Mr. C. W. Kraft, of the Jackson Park Yacht Club, that club will shortly come into the possession of a valuable trophy for "Q" Class sloops, to be competed for each year in a series of three races, under the auspices of the Jackson Park Yacht Club.

There is a fine fleet of class "Q" sloops on Lake Michigan, and this cup will do a lot to add to the interest of the racing in this sterling little class. Practically all of the racing "Q" boats are now in Chicago waters, and it will be remembered that in the 330-mile race last year from Chicago to Mackinac, for the Mackinac Cup, the "Q" boats, al-

A healthy, one-design class raced on the south side of Cape Cod by members of the Wianno Yacht Club.

though racing against much larger craft, finished in the first four places in this event.

Changes in Long Island Sound Yacht Racing Association

Racing yachtsmen on the Atlantic Coast are speculating over the almost complete change in personnel of the Officers and Executive Committee of that old and staid body, the Yacht Racing Association of Long Island Sound. This has been brought about by the publication of the report of the nominating committee for the coming year, which showed only two names on the ticket for Officers and Executive Committee that had served last year. This in itself is very unusual, especially as both of the officers retained have served the Association but a comparatively short time.

It will be remembered that when Commodore George Nichols accepted the office of President of the Association last year, he became actively identified for the first time with the Association. The other officers, however, had served for some years and were therefore thoroughly familiar with the work and needs of the Association. To leave Commodore Nichols as head of the Association, as has now been done, with an entirely new list of Officers and Executive Committee, hardly seems fair to the Commodore. For Vice-President, Charles A. Marsland was nominated, and while Mr. Marsland has been Secretary for two years, he has not had the long service that many of the other members of the Executive Committee have had.

It is understood that the action of the nominating committee was not unanimous, and it is to be very much regretted if any friction in the Association is caused by the action of the majority in the ticket which they presented.

Of the retiring officers, Mr. Frank Bowne Jones had been a member of the Executive Committee and an officer for some 27 years. He requested that he should not be renominated as he felt that the service he had given was as long as could be expected of anyone; but in making this request he probably did not anticipate an entirely new Executive Committee.

The retiring officers are: Frank Bowne Jones, Vice-President; Chas. A. Marsland, Secretary; Henry A. Jackson, Treasurer, and the Executive Committee, James W. Alker, Howell C. Perrin, John Clinton Work and Edwin H. Tucker.

And the new officers to be voted for at the annual meeting on March 29th are as follows: George Nichols, President; Charles A. Marsland, Vice-President; James D. Sparkman, Secretary; Donald Cowl, Treasurer; and for members of the Executive Committee, Adrian Iselin 2d, Phillip R. Mallory, and Clifford D. Mallory, Indian Harbor Yacht Club.

All on the new ticket are thorough racing men, but in the case of one of them it is said that the nominee was not even a delegate to the Association.

It is suggested that one of the reasons for the action of the nominating committee was the outgrowth of an incident at one of the regattas during Larchmont race week last year, which caused considerable discussion at the time, and resulted in this attempt to force one of the delegates of the Larchmont Yacht Club, a member of the Regatta Committee, off of the Executive Committee. Whether or not there will be an opposition ticket is not known at this writing.

A Healthy, Cape Cod One-Design Class

Editor YACHTING:

As I spend my summers on Cape Cod I thought you might be interested in seeing a photograph of a class of boats belonging to the Wianno Yacht Club. I have raced these boats for three years now. There is keen interest and the class is growing rapidly. A smaller class is being started, about fourteen in number, this coming season.

Few people think of the Cape in connection with boat racing. To my mind it is ideal. The water is shallow, which necessitates a boat of small draft and sturdy lines.

C. MCGREGORY WELLS, JR.

Another Star Class Fleet Added

Another squadron has been added to the recently formed Star class Association by the granting of a charter to a new fleet, known as the Massachusetts Coast Fleet, and making the sixth branch of the Association. This Fleet consists of eleven boats, heretofore known as the Nahant "Bugs," located at Nahant, Mass. These boats were built by Greene & Son, Chelsea, Mass., in 1911, from the original Gardner plans and are really Stars. J. H. Foster, commodore of the Nahant Dory Club, was the first to join the Star Class Y. R. A. as soon as he was advised that these Bugs and the Star boats were one and the same. The entry of this Fleet assures the Association six teams that will race for the National Championship Trophy.

"The Log of the Star Class," which the Association is publishing is not only for members but is to be sent to yacht clubs to promote the building of Stars in all sections. This book will contain all class rules, racing records since its origin in 1911 and a brief history of the development of the class, with many illustrations.

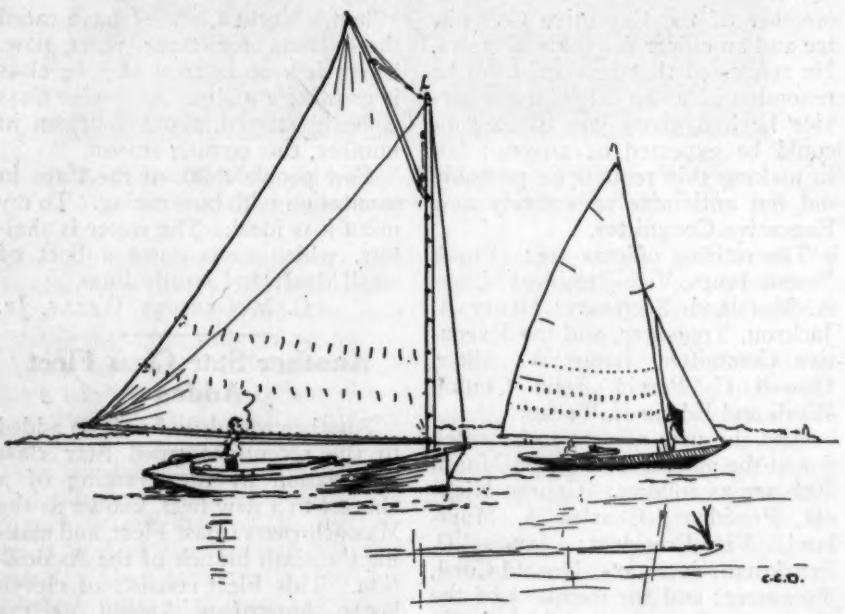
The new Association believes that it can thus claim another honor in being the first one-design class to issue its own book. Copies may be obtained by writing to the Secretary, G. W. Elder, Room 1623, 2 Rector Street, N. Y. City.

Sails, and How to Get the Most Out of Them

By C. G. DAVIS

TO the novice at yachting a sail is just a piece of canvas that he spreads out so that the wind can blow against it and make his boat move through the water.

We older yachtsmen have all been through this interesting period of life, have bought our first sails from an awning maker because he would make them cheaper than a regular sailmaker, have bragged about the flatness of our sails (for they were flat indeed, without a vestige of broadseaming or roach) and have shown our strength by pulling out the reef-earing so hard that the sail carried a "nigger-heel" ever after. In the course of several years we began to learn that there were some things about sails we did not know, and then, once we had got rid of our self conceit we began to learn something about sails, what they were made of and how to use them. Then, we found canvas was nothing but a mass of strings woven crosswise and that they would give more or less when pulled diagonally. We learned that some canvas was woven so tightly it gave very little, while some was so loosely laid up it would pull all out of shape; and we found that, just as in ropes, the quality of the fibre forming the strings had a lot to do, in fact had *all* to do, with the suitability or unsuitability of the canvas.

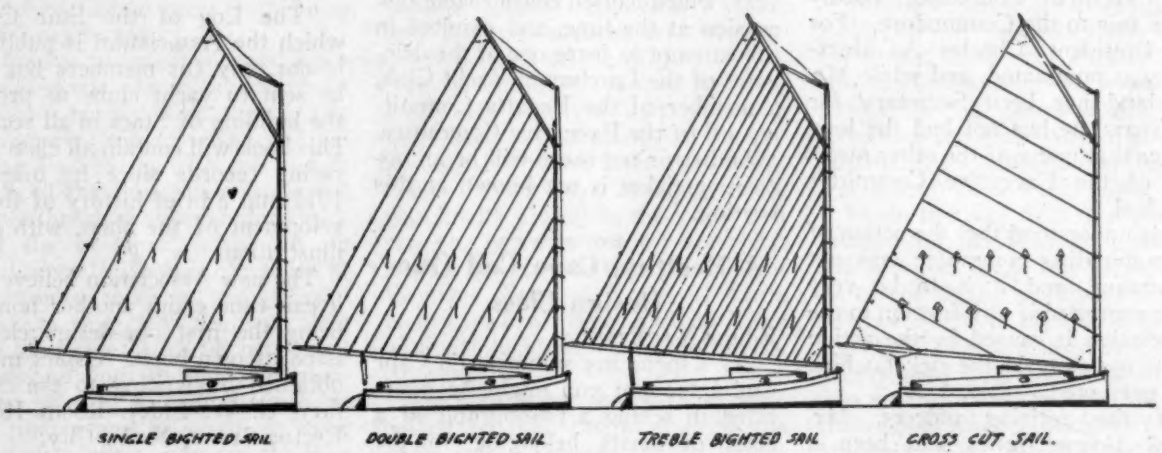


In olden times hemp used to be made into sail cloth, and jolly old wind bags they made; then flax was used, as in the hey-day of American naval glory when cotton was only used for covers, etc. Then cotton came into use, and only the best was good enough. Sailmakers even went so far as to get canvas made up of special Sea Island cotton that had an extra long and silky fibre. Some of the large, light, balloon sails such as spinnakers and balloon jibs are, now-a-days, even made up of silk and they will coax a breeze and pull like a cart-horse where a heavier sail will hang flat and not pull a pound.

In the old days, also, the canvas was so loosely woven that on a hot, dry day it was as porous as a piece of old gunny sack, and to make it hold the wind they used to hoist up buckets of water and throw it over the sails to try to swell the fibre of the canvas so that it would close up.

I was talking recently with "Pete" Gallagher and in speaking about the old North River sloops he told me how he, and several others, took the famous old sloop *Victorine* and raced her on July 4, 1866, against the sloop *Liberty,* of Port Chester. *Victorine* was owned by Quakers who used her in connection with their foundry up the Hudson River, where they made castings for sugar refining machinery. These Quakers were opposed to racing, counting it as one form of gambling, so *Victorine's* captain, who connived at the proceedings, was invited ashore for a drink and while he was gone Pete and his friends made sail on the *Victorine* and sailed a race off Haverstraw from Smeades to Croton Point, twice around.

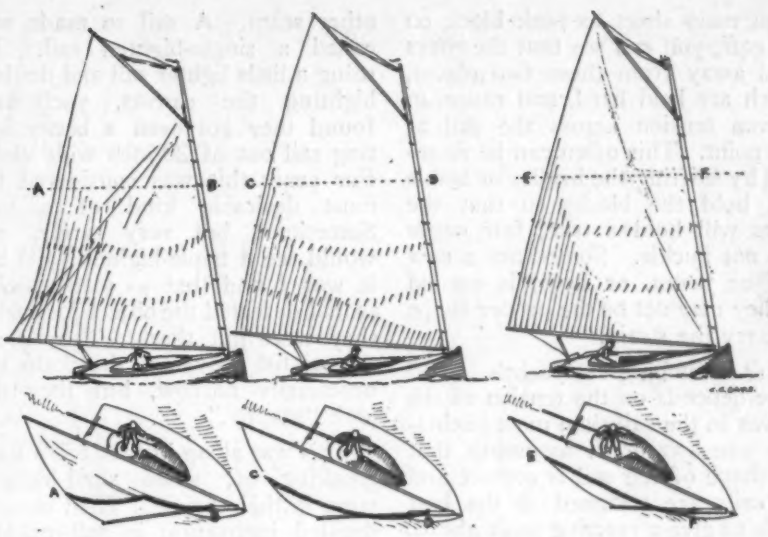
The *Liberty* had the race won, but her captain, fearing the *Victorine* would catch him, as the breeze was dying down, sent two men up on the gaff, while men on deck hoisted up buckets of water to them, which they dumped over the mainsail. Unfortunately for her, their weight, probably aided by the



shrinking canvas, broke the *Liberty's* gaff and so *Victorine* won the race after all. So this practice of using water was kept up as late as 1866, as this incident shows.

Cotton canvas, in its manufacture, has a starch-like sizing put in it and that is what turns to a black sort of fungus if the sails are stowed away in a hot, unventilated place while they are still wet. Never stow a sail away for any length of time while it is even damp. I have seen this mildew develop in two days in a sail stowed away in the close, hot fore-peak of a yacht. If, after a hard, wet sail, when the canvas has become soaked, you leave the sail covers off and do not even roll the canvas up closely, it is far better for the sail. If the covers are put on and a hot sun comes out the moisture and the starch in the canvas begins to cook and a black mildew results. Frequently new sails are treated now-a-days by a mildew proofing process—given a washing in chemicals that dissolves most of the starch—and they are then much less liable to become black streaked and spotted.

The making of a good sail is an art. There are so many points to be considered and the material used is so flimsy, great care has to be used. The plan of the sail merely shows its outline and dimensions, considered as a flat plane. When the breeze blows against the sail it must bend, and it does. If it were cut as a plane, the middle of each edge would pull in towards the center as the cloth bellied out and the canvas itself would give or stretch a little. It is the sailmaker's job to cut the edges of the sail not in a straight line from clew to clew, but in an arc or parabolic curve. He has to lap the breadths of cloths as they are sewed, widening the seams near the edges (broadseaming it is called) and to gather up the canvas as it is sewed to the bolt rope so that, when it is set in a breeze, the sail will swell in a true parabolic curve from mast to leech, like a bird's wing.

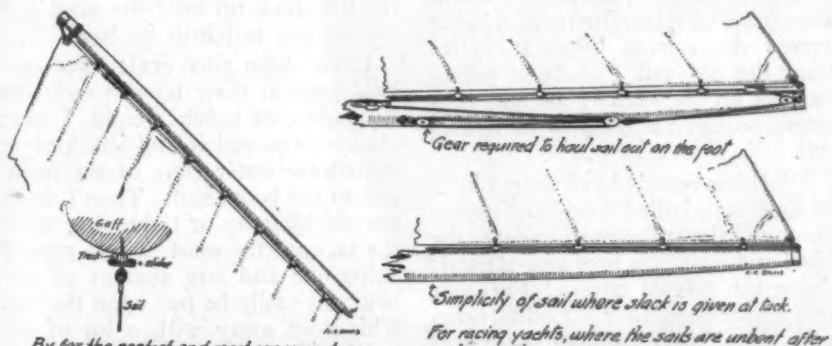


The peak not hoisted high enough throws a bad ridge across the sail. Heavy black line shows shape across sail - OK. for light winds. Shape for hard winds - The peak well up, and all halliards pulled up hard to flatten canvas.

Very often, when a good sailmaker has done all this properly, the sail does not set well and he gets the blame, when the fault lies with the spars. The shape of the spars prevents their bending in harmony with the sail and hard spots develop. This is sometimes due to the halyards and sheets that hold them not being made fast right, which makes the spars bend at the wrong place, injuring the set of the sail. It can be remedied by readjusting the halyards. This is the yachtsman's fault, as no matter how well the builders, sail makers and riggers do their work the handling of the boat and getting all the speed possible out of her is the yachtsman's problem.

In many instances I can remember a new sail has been sent back to the sailmaker to have some cut off the foot to raise the boom, when the fault was that the jib stay, being new, had stretched letting the mast back. A plumb-bob should be dropped from the masthead when the yacht is new to see that everything is according to design, and a small brass escutcheon pin driven in to mark the spot. Then try this plumb-bob again occasionally and you will be surprised to find how much wire rope will stretch and how far the mast head has come aft. Be careful to have the yacht trimmed to the same marks forward and aft when you do this. Much that is blamed on the sails will thus be eliminated.

Study the bend of your gaff and boom and if, in a hard blow, a hard streak develops up through the sail

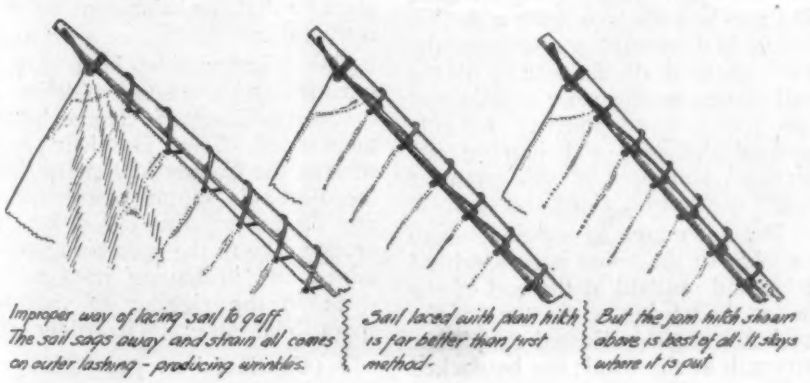


By far the neatest and most convenient way of attaching sail to spar is the small brass track fitted with sliding hanks. Sail may be quickly unbent. The sail is held snug to the spar and besides being neater there is very little wind friction

Gear required to haul sail out on the foot

Simplicity of sail where slack is given at tack.

For racing yachts, where the sails are unbent after each race, the simplicity and lightness of lower style is recommended. The after leach is then always in the same place and the baggy or flat canvas can be easily adjusted at the tack lashing at the mast.



Improper way of lacing sail to gaff. The sail sags away and strain all comes on outer lashing - producing wrinkles. Sail laced with plain hitch is far better than first method. But the jam hitch shown above is best of all. It stays where it is put

from main sheet to peak block on the gaff, you can see that the spars bend away from these two places, which are held hard, and cause an uneven tension across the sail at this point. This often can be remedied by shifting the bridles or bands that hold the blocks so that the spars will hold a true, fair curve and not buckle. Sometimes a new gaff or boom, or both, is needed as they may not be the proper shape to carry the strain.

In developing a yacht's speed more depends on the tension of the canvas in the sail than most yachtsmen are aware of, assuming that the shape of the sail is correct and the sails are trimmed at the best angle to give a reacting push ahead. I have seen amateurs, making sail on a calm day, put three men on the halyards and swig up a thirty-footer's sail as taut as a fiddle string. In that kind of weather, when you try to coax a yacht into moving ahead with little or no wind, the sails should be hoisted very slack; keep the tension off the canvas, let it bag out, and sail her broad. You can't expect to lay up into the wind's eye—the main thing is to get the yacht moving, get way on her, and then only point up to where she will keep moving. In a hard breeze it is different; then is the time to swig up and jig up. The sails will bend out in spite of you and you need all the tension on the canvas you can get with the gear at hand to hoist with. At sea, we always used watch-tackles and once a day went the rounds of the ship and jigged up tight on all sheets and braces to take up slack; but in calm weather we surged or slacked everything up a little. Racing yachts do the same when they carry a crew who are experienced in the art of sailing.

Sail cloth used to be made in different thicknesses, from No. 000 down to the light 6 ounce, but always in one standard width of 20 inches. In large vessels the cloths were lapped about an inch, there being a blue cord woven in, called a selvage, that showed the breadth to lap the clothes in sewing them together.

For small yachts, using 6- or 8-ounce canvas, it was customary, in sails where the seams ran from boom to gaff, to make a dummy seam up the middle so as to narrow the canvas and prevent its stretching. This was known as a bight, the cloth being folded back on itself and then back again and the three thicknesses sewed together so that it looked at a distance like another seam. A sail so made was called a single-bighted sail. By using a little lighter sail and double-bighting the canvas, yachtsmen found they got even a better setting sail out of 20-inch wide cloth. For years this was considered the most desirable kind of a sail. Sometimes, but very rarely, one would see a triple-bighted sail; but it was found that as many bights as that defeated the object for which they were put there. They made the sail too heavy and the cloths unnecessarily narrow, but they did look "snappy."

This was along in the 1880's I am speaking of, when sand-baggers were in their prime. Then came a decided innovation in sail-making. A Herreshoff yacht appeared upon the scene with extremely light sails and with the seams running horizontally across the sail, a custom now universal. But oh! what a storm of argument was put up against the first "cross-cut" sails, as they are called.

The seams of the vertical cut sail were a source of strength, as of a lot of parallel lines tying boom and gaff together at frequent intervals—and they really do last a little longer when used for rough work. But for the light displacement yachts, the cross-cut works out to advantage. In the first place, the seams do not make a file-like surface for the wind to blow across; that in itself is an advantage worth the change. Also, the tension being across the canvas keeps it flatter than the old sail (where it pulled hardest on the seams) and the few seams required make a much lighter sail.

Working vessels have short pieces of light rope called rope-bands wove through the grommets along the head and foot of a fore-and-aft sail; these are passed around the spar and knotted together. Yachts, however, bend their sails to some sort of a jack-stay, or slides on a wood or metal track along the top of the boom; or, they lace them with a series of jam hitches along the gaff. Do not lace the sail with a rolling hitch, just around and around the gaff, as then all the weight of the sail comes on the peak cringle and the sail has a tendency to ride around the spar and jam on one side. A jam hitch at each grommet holds the sail all along the spar.

The advantage of some jack-stay or slide on the boom is that, with a slide and outhaul at the end of the boom, the tension on the cloth of the mainsail can be adjusted to suit the strength of the wind; can be slacked up in case of a heavy rain and thus prevent the sail becoming "nigger heeled." "Nigger heeled" is the opposite to roach. A sail is said to have a roach when it curves outward from a straight line drawn from cringle to cringle, or a "nigger heel" when it curves inward from such a line. The latter is common in old sails where the continual strain has pulled and stretched the head and foot bolt-ropes of a sail. On a new sail it is an indication of bad usage, and is classed on a par with baggy-kneed breeches. Never be in a hurry to pull the head and foot of a new sail out to its full length on the spars. Give the body of the sail a chance to stretch first, and only take up slack on the outer ends as the sail gives it to you.

It is very good practice to let go the peak and clew earing or lashing on a racing yacht after every race. When a man realizes that his success or failure, his winning a race or losing it, depends on the condition of his yacht's sails, he takes more care of them. Some go so far as to unbend their sails and take them ashore to stow them in a boat-house between week-end races. On boats such as the Victory Class or the Star Class, where Marconi rigs are used, this is a very simple matter, as brass tracks and slides on the mast and boom facilitate their removal considerably. All one has to do is to let go three shackles, one at each corner, and pull the slides off the track up near the mast and bundle the sail into its bag.

Even these tiny craft have outhaul gear at their boom's end; but this adds so much weight I have always removed it and shackled or lashed the outer clew of the mainsail to the boom end. Then I do all my slacking up or tightening up at the tack, at the mast, where gravity helps one and any amount of tension can easily be put upon the sail. This does away with a lot of unnecessary "gilguys," as such contrivances as this outhaul slide are nicknamed at sea, and you always have your after leech in the same place so that the balance of the boat is the same.

The Victory class boats are so sensitive and are hung so delicately that every inch of change affects their speed. They, like their predecessors, the Connecticut sharpie and the Bermuda dinghies and yachts, are dependent for speed on the proper rake to the mast being maintained and in having just enough slack to the rigging so that the spars hold true. The older rigs

(*Continued on page* 235)

Photo by Rosenfeld.

"Over loaded, under manned,
Trusting to a lee,
Playing I-spy with the land,
Jockeying the sea—
That's the way the coaster goes
Through calm and hurricane,
Everywhere the tide flows,
Everywhere the wind blows,
From Mexico to Maine."

Thomas Fleming Day.

Photo by M. Rosenfeld.

Close Hauled!
***Vanitie* and the Steam Yacht *Sioux*.**

"Her as used to be, crack o' Moore, Mackellar's line, back in ninety-three."

The Rhyme of the *Rio Grande*

An Incident of the Late War

BY Salthouse Dock as I did pass one day not long ago,
I chanced to meet a sailorman that once I used to know;
His eye it had a roving gleam, his step was light and gay,
He looked like one just in from sea to blow a nine months' pay.
And as he passed athwart my hawse he hailed me long and loud:
"Oh, find me now a full saloon where I may stand the crowd:
I'm out to rouse the town this night, as any man may be
That's just come off a salvage job, my lad, the same as me—

"Bringin' home the *Rio Grande*, her as used to be
Crack o' Moore, Mackellar's line, back in ninety-three,—
First of all the 'Frisco fleet home in ninety-eight,
Ninety days to Carrick Roads from the Golden Gate;
Thirty shellbacks used to have all their work to do
Haulin' them big yards of hers, heavin' of her to
Down off Dago Ramirez, where the big winds blow,
Bringin' home the *Rio Grande* twenty years ago!

"We picked her up one morning, homeward bound from Portland, Maine,
In a nine-knot gruntin' cargo tramp by name the *Crown o' Spain*.
The day was breakin' cold and dark and dirty as could be,
It was blowing up for weather, as we couldn't help but see.
Her crew was gone the Lord knows where—and 'Fritz' had left her too,
He must have took a scare and left afore his job was through;
We tried to pass a hawser, but it warn't no kind o' good,
So we put a salvage crew aboard, to save her if we could—

"Bringin' home the *Rio Grande* and her freight as well,
Half-a-score o' steamboatmen cursin' her like hell,
Floundering in the flooded waist, scramblin' for a hold,
Hanging on with teeth and toes, dippin' when she rolled;
Ginger Dan the donkeyman, Joe the doctor's mate,
Loafers off the water-front, greasers from the Plate,
That's the sort of crowd we had to reef and steer and haul—
Bringin' home the *Rio Grande*, ship and freight and all.

"Our mate had served his time in sail, he was a bully boy,
It'd wake a corpse to hear him hail 'Foretopsail yard ahoy!'

He knew the ways of squaresail and he knew the way to swear,
He'd got the habit of it here and there and everywhere;
He'd some samples from the Baltic and some more from Mozambique,
Chinook and Chink and double-Dutch and Mexican and Greek,
He'd a word or two in Russian, but he learned the best he'd got
Off a pious preachin' skipper—and he had to use the lot—

"Bringin' home the *Rio Grande* in a seven days' gale,
Seven days and seven nights, the same as Jonah's whale,
Standard compass gone to bits, steering all adrift,
Courses split and mainmast sprung, cargo on the shift,
Not a chart in all the ship left to steer her by—
Not a glimpse of star or sun in the bloomin' sky . . .
Two men at the jury wheel, kickin' like a mule,
Bringin' home the *Rio Grande* up to Liverpool.

"The seventh day off South Stack Light the sun begun to shine;
Up come an Admiralty tug and offered us a line;
The mate he took the megaphone and leaned across the rail,
And this, or something like it, was his answer to their hail:
He'd take it very kindly if they'd tell us where we were,
And he hoped the war was going well, he'd got a brother there,
And he'd thought about their offer, and he thanked them kindly too,
But since we'd brought her up so far, by God, we'd see it through—

"Bringin' home the *Rio Grande*—and we done it too!
Courses split and mainmast sprung—half-a-watch for crew—
Bringin' home the *Rio Grande* and her freight as well—
Half-a-score of steamboatmen cursing her like hell—
Her as led the grain fleet home back in ninety-eight—
Ninety days to Carrick Roads from the Golden Gate—
Half-a-score of steamboatmen to reef and steer and haul—
Bringin' home the *Rio Grande*—ship and freight and all!"

C. FOX SMITH, in *Ships and Folks.*

Sea Chest and How to Build Her

By D. S. SIMPSON, M.E.

PART IV

LAST month we left *Sea Chest* in frame ready to be planked, a job usually the bugbear of the amateur builder because the planks cannot be laid out beforehand but must be shaped on the job. Although I have never heard it mentioned before, this little job of shaping or "spiling" the planks can be studied out very well on the desk at home with the aid of a few pieces of cardboard. Lets try it.

Bearing in mind that no plank on a boat has really a straight edge, cut one edge of a piece of cardboard to a curve something like A-A in the sketch. Tack this down to the drawing board and pretend that it is the edge of a plank nailed to the boat. The problem is to fit another plank to it so that the seam or joint between them will look respectable. Take another strip of cardboard and lay it out as close to the first piece as possible (B-B in the sketch). On the real job this would be a board ¼ or ⅜" thick and about 6" wide. Take care not to spring it edge wise but let it lie naturally and close to the frames on both edges.

Now draw any number of lines across the two pieces approximately perpendicular to the edge. Now set the two points of your dividers a little further apart than the greatest distance between the edges of the two pieces and set off this distance from the given edge (A-A) on each cross line. Remove the card and lay it on a third piece (representing the new plank on the boat) and reverse the process. That is to say, extend the lines from piece B-B (or spiling plank) across the new piece, and without changing the dividers set off on each line the distance from the marks previously made. This will give a series of points on the third piece or plank through which a batten is to be run and a fair line drawn. Cut the card to this line (C-C) and try it on the original edge (A-A) and if the job has been well done the two should fit together prettily. If they don't, try it again, as it is cheaper to spoil many pieces of cardboard than one plank. When you can bring the two cards together you can go out and try the process on the boat.

Before planking, stopwaters are fitted in the keel. These are ½" round sticks of white pine driven tightly into bored holes where any seam in the keel construction crosses the rabbet line. They should be so placed as to be covered by the planking. Their object is to prevent water creeping along the seam into the boat.

The first plank to put on the boat is the garboard, which goes next to the keel. One edge fits against the keel and rests on the cap. The other edge lays on the frames. First, go over the job with a short piece of plank and see that the cap is properly beveled and that the rabbet in the forefoot is properly cut. This rabbet can be carried along the whole keel so that the edge of the plank can be left square. After this you can spile the shape of the plank against the keel.

Each garboard is put on in two pieces, butting one frame space from the butt in sheer strake. The width should be about seven inches amidship, nearly the same forward and about four at the transom. A usual mistake is to make garboards too narrow at the forward end. The forward sections of this plank will have to be steamed to get them in place and as it is difficult to fit them when one part stands off, fit as nearly as you can and then after steaming clamp them snugly in place leaving them to cool while you set about some other job.

Like all other planks they need

clamping in two directions; first so that both edges lie close up against frame or keel cap and then set sideways so that it lies against the keel or other plank. It can be pulled against the frames by screw clamps and can be set edgewise by many methods. The ship chandlers will cheerfully sell a very neat chain clamp for the purpose, which gets its purchase on the keel or sheerstrake. They also have cheaper gadgets that get a grip on a frame and provide backing for a wooden wedge to drive the plank down. You can accomplish the same thing with a little more trouble by clamping a block to the frame and wedgeing against that.

When the garboard has cooled and set you can take off the clamps and check up the fit. Make sure the joint between keel and plank is tighter on the inside than outside (it really should lie snug on the inside) and fasten it in place with screws every two inches or so in the forefoot, a screw at the outer edge into the frame, in the middle to the floor timber and one into the cap at every frame and one in between. The after half and the butt block is easy.

I have forgotten one caution; see that the two halves of the plank are the same width where they butt and that their edges do not form an angle here but continue a fair curve.

We now have a definite space between the garboard and sheerstrakes to fill up with planking and the next thing is to determine the widths of the planks at various parts of the boat. Nothing looks more amateurish than to see a wide plank in between two narrow ones and it is just as easy as not to make them all alike.

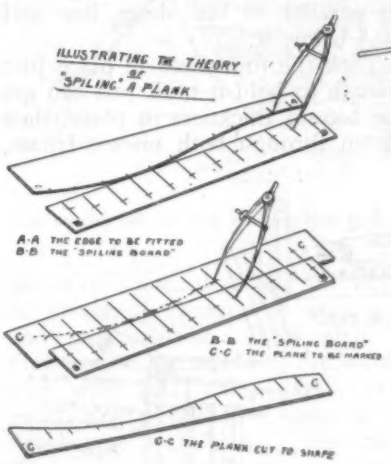
Sea Chest should have nine or ten planks between sheer and garboard. Get out your dividers and step off the space along the third frame, altering the set until it will just go, say, nine times. Spot this distance on a convenient piece of board and mark it for identification. Move along aft about three frames and repeat the process, then on the third frame beyond, etc., until you have marked on your board eight or nine distances, which are the widths of any plank on the frame noted.

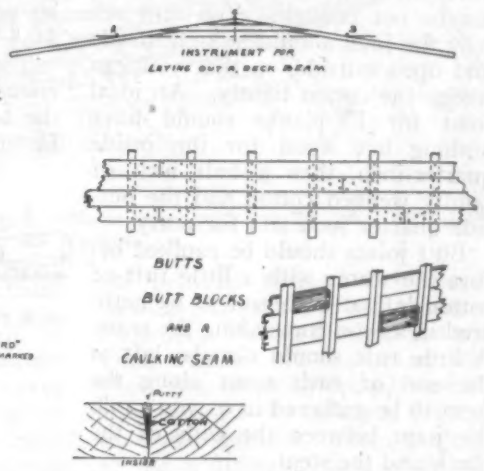
You can then spile in and shape up the edge next to the garboard (forward end first) and after it is fitted lay out the widths as obtained; run a batten through them carrying it out to end in a fair line and draw the line representing the other edge of the plank. The butt on this plank should be at least three frames aft of that on the garboard. (In general there should always be at least two full frame spaces between butts of adjacent planks and at least two planks between butts on the same frame space.)

As each plank is gotten out use it as a pattern for the corresponding plank of the other side. Finish one plank all around before going on.

There should be three to five fastenings in the stem, three in each frame, three to five in transom (and reinforcement) and five in the butt block. Keep all seams tight as possible on the inside but they may properly be open a bit on the outside.

Get three planks fastened all around (beside the garboard) and then with your dividers step off the


ILLUSTRATING THE THEORY OF "SPILING" A PLANK
A-A THE EDGE TO BE FITTED
B-B THE "SPILING BOARD"
B-B THE "SPILING BOARD"
C-C THE PLANK TO BE MARKED
C-C THE PLANK CUT TO SHAPE



widths again, as you have varied somewhat from the schedule. Also you can use No. 1 frame and get closer to the ends. Using the new gauges put three planks all around below the sheer strake. Then check up on widths and put another plank at the bottom and then on the top. Watch the placing of butts carefully so that the last ones will not be too close together.

There is now space left for one plank, and the easiest way to get it is to hold a board in place so that you can get inside the boat and draw it off from the edges of the adjacent planks. Cut it large as it had better require coaxing into place rather than to "fall" in.

The planking can be finished up at any time while the subsequent work is going on, but we will describe the process and get it off our minds. It is, first, to be smoothed off. This is a fine job for an amateur because you can plane across the planks or along 'em, even preferably across from one to the other at the beginning, because the object is to transform the side of the boat from a many sided surface to one smooth round one. Use a short plane and round off the corners of the cutter. Leave as few ridges and plane marks as possible as they only make the sandpapering harder. Keep the plane sharp or it will break up the edges of the planks.

Follow the planing with a good scrub of coarse sandpaper and then use as many grades of fine paper as you like. Of course the screw heads have all been well sunk in so as to clear the plank and leave a holding ground for putty.

The next job is the caulking, and while most dissertations on boatbuilding advise us to get a professional for this, we are out to save money and are going to do it ourselves. We need about three pounds of caulking cotton, a one-sixteenth thick caulking iron and a wooden mallet, though the hammer will do. The cotton comes in hanks and is unspun, that is, it is not twisted like a string. It should be rolled up in a ball for convenience and can be spun or twisted between the hands as you go.

Pick up the caulking iron in your left hand (if you are right handed) and tap it lightly with the mallet or hammer. Then reverse the iron in your hand and turn your hand over so you can again hit the head of the iron. That is the way it should be held, with the thumb and first finger well down toward the edge of the blade, the whole iron in the palm of the hand and its head sticking up past the little finger. Now put the ball of cotton well to your left. Bring the end of it over your left wrist and pick it up between the first finger and the iron. There is only one way you can do this. The cotton will pass between your first and second finger and with a little practice you have perfect control of it. The next thing to remember is that the cotton is not

laid lengthwise in the seam (the joints between the planks have now become seams if you please) but driven in in little loops as in this way the varying width of the seams can be accommodated with varying amounts of cotton.

Start at the right hand end of any seam, lay the end of the cotton *across* the seam and drive it in with the iron—not too tightly but enough to hold it there. Move along an inch or so, letting the cotton slip between the iron and finger, push up a loop with the end of the iron and drive that in, then an other inch and another loop and so on for, say, a foot. Then go back and drive the loops in, hard this time, until it feels solid under the iron. Then look it over, see if the cotton has come through inside. Maybe you have put in too much in the loops, maybe not enough. You now see why the joint should be tight inside and open outside, so that you can wedge the cotton tightly. An ideal joint for 1" planks should have nothing but wood for the inside quarter-inch, then a half inch of tightly wedged cotton and the outside quarter inch left for putty.

Butt joints should be caulked before the seams with a little tuft of cotton left at each end to be gathered in as you come along the seam. A little tuft should also be left at the end of each seam along the stem to be gathered in as you caulk the joint between the ends of the plank and the stem.

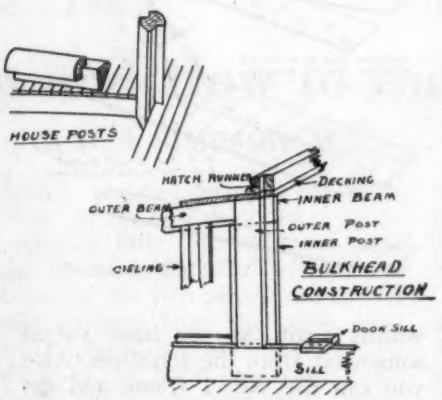
After caulking, all the joints and seams should be well painted. Get a "seam brush" for this (it resembles an overgrown toothbrush) as it is the only possible thing with which to get the paint clear down to the cotton. After a priming coat of paint has been put on and dried, all seams, screw holes and blemishes should be puttied. Use ordinary putty mixed with about one quarter its bulk of white lead. If you are going to have a black boat, mix in some lampblack or your boat will sometime be striped like a zebra. Give the putty plenty of time to harden before smoothing it off or painting again.

At any time after planking you can take out the moulds and begin work on the inside. Before taking them out get four stout pieces and lay them across the sheer planks at convenient places. Nail blocks to them strongly to grip the sheer planks and mark their positions. After the moulds have been taken out the boat will probably have to be sprung together in order to get these stays back in place. Then look it over to make sure the sides are fair. Possibly one or another of the stays will have to be changed somewhat.

For the first time now you can begin to see just what room there is in this little vessel and will doubtless start in immediately to make changes in the arrangement. But let's assume you are going to make her "as is" and get on with the job.

The first inside work is to get in the clamps or stringers running along the sheer. This is put in in two sections and as you may have difficulty in steaming such a large piece the forward half may be put in in two thicknesses, each being 1⅛" thick and 2½" wide, clear yellow pine. There should be no trouble in bending these to place without steaming. The forward ends should be beveled to fit closely to the stem. The upper edge will be parallel to the sheer line and 2½" below it.

Tack the first piece in place just enough to hold it until you can get the second thickness in place, then fasten through both pieces, frame,



and sheer strake. A 30d. wire nail with a washer to fit makes a good rivet for this job. Where possible remove the original fastenings from the sheer plank and replace with the through fastening, one fastening to a frame.

Cut this part of the clamp to length as shown in the drawings and put in the after section. Note that this laps the forward section five or six feet and lies on top of it, coming flush with the sheer line. Fasten it in the same way. It should be beveled at the after end to fit against the transom.

The other stringer, shown at the turn of the bilge, will be a little harder to fit if it is put in in one length, as it should fit against both stem and transom. If put in in two lengths, they must lap for three frames and be riveted together as well as to the frames. The exact location does not matter.

Clamps and stringers should be connected to the transom by small knees sawed from two inch oak, as shown in the construction plan. (See February number.) Each pair is bolted together at the forward end with an oak block or "breasthook" between them. Put a drift bolt through the breast hooks into the stem.

Next in order come the deck beams, which are all cut to the same curvature or "crown" so that one pattern will do for the bunch. The pattern is laid out as illustrated in the sketch.

Draw the line A-B equal to the widest part of the boat, 6′ 6″. At the middle point set up a perpendicular and mark C, 3½" off the line. Drive a nail at each of the three points, letting the nails stand up an inch or so for guides. Then make two straight edges seven feet long and tack them together so that their junction lies at C and their edges against A and B forming two sides of a triangle. Then slide them along either way, keeping the edges against the nails A and B, and the point will mark the proper curve for the beams. Trim the pattern off to this curve and gauge another line three inches inside for the under side of the beam. Be sure the center line (at C) is marked on the pattern.

The main beam, under the forward end of the house, is the first to go in. Cut it a little longer than necessary. It should fit snugly and there is a little trick that makes the job easy. Lay the beam in position, but upside down; be sure its centerline is in the middle of the boat. It is resting on the sheer strakes so, using them as a guide, mark across the top of the beam (now underneath) at the inside of the sheer strake. Turn it over. You will note that the lines cross at an angle and that the widest part is forward. This is obviously wrong and is due to turning the beam over after it was marked; so square across to get the widest distance on the after side. Now, lay your rule against the inner side of the sheer strake, letting it project up alongside the beam. Slide the beam along until the mark on its upper surface comes to the rule and draw the line down its after side. Without moving the beam put the rule on its forward side and against the sheer strake, drawing another line. This gives three lines for cutting the beam to the proper bevel. Both ends should be marked before cutting either. The beam should now drop into place and rest on the clamps. It will stick up above the sheer strake and should be notched

out until it will lie flush and so that its curve will carry out to the outer corner of the plank. The inner corner of the plank may have to be cut off. Do not cut the clamp but do all notching in the beam. To fasten, put a drift through the beam into the clamp. The beam at the after end of cockpit cannot be fastened this way but must be secured to the clamp with oak or metal knees.

Between the forward end of house and after end of cockpit there are no beams, but four hanging knees spaced as shown. These lie alongside the frames and are fastened to both frames and planking. The upper, or deck, legs are eleven inches long and are shaped by the use of the beam pattern. This also comes in handy for shaping the top of the transom and the block up forward that fills up the breasthook to the height of the beams.

The mast comes down between the main beam and the one next it, so these must be stiffened. This is done by putting in horizontal knees leading aft from the main beam and forward from the other. These knees are as thick as the beam is wide and are securely fastened to the beams, the clamps and the sheerstrakes. Then a block about ten inches wide is fitted between the beams and also fastened to sheer and clamps. Then there is the partner block itself. This is also about three inches thick, fourteen inches wide and long enough to fit snugly between the two beams in the middle of the ship. When it is temporarily in place lay out the position of the mast and cut a hole six inches in diameter. Do this before fastening the block or you will surely have to saw the fastenings out again. The block is secured by through bolting beams and block and a bolt is put in crossways each side of the hole. It is much easier to do this before fastening the other deck beams.

Four hanging knees should secure these two important beams to the frames. They can be made of wood but as headroom here is useful it is better to mark out a pattern and have the blacksmith make them of iron.

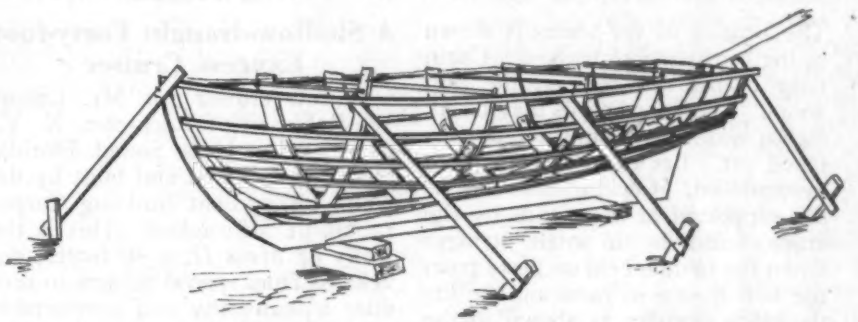
We can now start the decking. The first plank is of oak and runs down the centerline, from stem to main beam. This can be as wide as the partner block if you desire, The forward end tapers to about the width of the stem. Securely fasten to all beams with screws or large nails, well countersunk.

The next plank to lay is known variously as the covering board, waterway and other names. It is the deck plank which follows around the side and is fastened to the deck beams, sheer plank and to the after part of the clamp. It is made of oak and sawed to shape, being three inches wide. Each side is put on in three pieces and instead of a butt joint we use a scarf joint as shown in the drawings. The scarf should be about eight inches long. The edge of the sheer plank will need beveling to make a good fit.

The side decks come next and they may be of cypress or pine, cut into strips 1⅛" square. Spring one in against the water way and get the bevel forward so that the strips fit closely between the waterway and partnerplank. This strip is then to be edge nailed to the waterway with 10d. nails about every eight inches, and also fastened to deckbeams and knees. The next strip is laid in the same way setting the nails 3 inches away from those in the first strip. You will note that the nails now go through both strips and three quarters of an inch into the waterway. Continue until you have laid seven strips on each side, which should bring you to the ends of the deck knees and give a deck about eleven inches wide. The forward ends of the strips will have left the breasthook and it will be necessary to screw a three inch strip to the underside of the partner plank to hold them. These decking strips may be joined by a two inch scarf wherever convenient, putting a nail through the scarf.

After the side decks are laid there is a little triangle to fill up forward between them and the partner plank. This extends back only as far as the main beam. The after deck is also to be finished. Be sure all nails are well countersunk. Plane and sandpaper the entire deck just as with the planking. Cut it off smoothly at the main beam, at the cockpit beam and at the transom, and bevel the edge along the cabin and cockpit until it is perpendicular. You are then ready to cover it with the canvas.

If you are unable to get the canvas wide enough (it requires 80") get it in two pieces and sew them together. It should be a lap seam about the width of the colored thread run near the edge of the cloth and should be stitched twice, one near each edge. The apparatus for stretching it will consist merely of four narrow boards about seven feet long, a few of your clamps and a tackle, with some place to anchor it. Give the whole deck a good coat of paint and as soon as possible get the canvas over it. Clamp the ends of the canvas between two of the boards. Anchor one end, get the tackle on the other. Pull as hard as you can. Then start at the bow and with your crew working opposite on the other side of the boat get the canvas down and tack it along the edge of the waterway, using large copper tacks every inch, or less. Stretch the canvas sidewise as you go (pliers are very handy and save your fingers a lot) but keep an eye on the center seam that it stays straight. Across the transom put the tacks in the deck, not on the edge or ends of the planks.

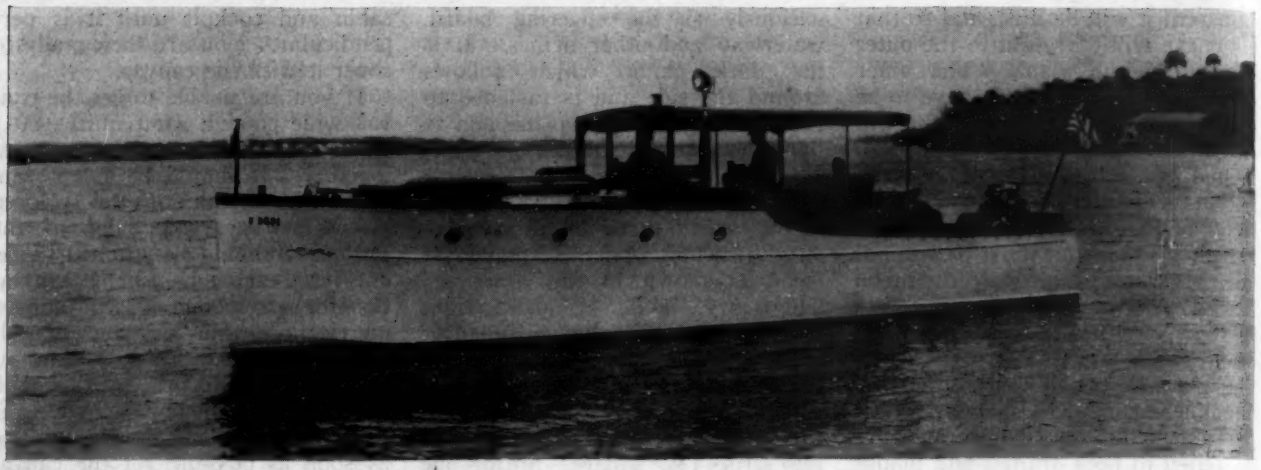


The moulds set up and tied together with ribbands before putting in the sheer strake, clamp and planking.

Then climb aboard and tack carefully all around the cockpit. Your weight on the canvas helps to stretch it. The tacks should be driven into the deck here and not in the edge of the planks. Keep them about three-quarters of an inch from the edge. This piece of canvas in the cockpit can then be cut out, leaving a two inch flap all around the inside edge.

Now see that the seam between sheerstrake and waterway is well puttied and painted, then tack the canvas over it about half an inch below the seam and cut off close to the tacks. Next paint the canvas all over with the deck color. There are several paints made especially for canvas work.

Now is as good a time as any to get in the cabin and cockpit floors.



Dolly DeMoss II, a new 40-footer for Florida use, designed and built by the Great Lakes Boat Building Corp. for Mr. Lucius W. Robinson of Rochester.

The location of the beams is shown in the construction drawing. Cabin floor beams can rest on the hull floors. The floor boards may be six inches wide but should not be fastened yet. Let them stay in place to work on. Cockpit floor beams are supported at their ends by the frames and by a small stringer down the middle held on posts from the hull floors. Frame up the little hatch opening as shown in the sketches. The sill for the cabin bulkhead is oak, 1″ thick and 8″ wide. A strip about 1¼″ square is screwed to its after side at the lower edge, and the sill is fastened to the proper frames so that the top of this strip is on the same level with the cockpit beams. A strip is screwed to the transom at the same level. The cockpit floor is laid in three-inch matched strips (tongue and groove flooring). There is no intent to have it absolutely water tight though it can be made practically so if you are careful about fitting around and between the frames (to the planking) and caulking this joint.

The posts for the cabin sides are next fitted. The forward ones are rabbeted on two sides as shown in the sketch and notched over the deck so that they can be bolted to the main beam. The others are two-inch square sticks of oak that come at the bulkhead and extend clear to the bottom. They will land somewhere near the stringer and a frame and should be well secured to them. Their after surface should come flush with after side of the hanging knees and they can be drift-bolted there. They can also be screwed to the bulkhead sill. Leave them plenty long and put a temporary brace across the top. Where they touch the deck, turn up the canvas flap there. Put in a pair of temporary posts halfway between

(*Continued on page* 248)

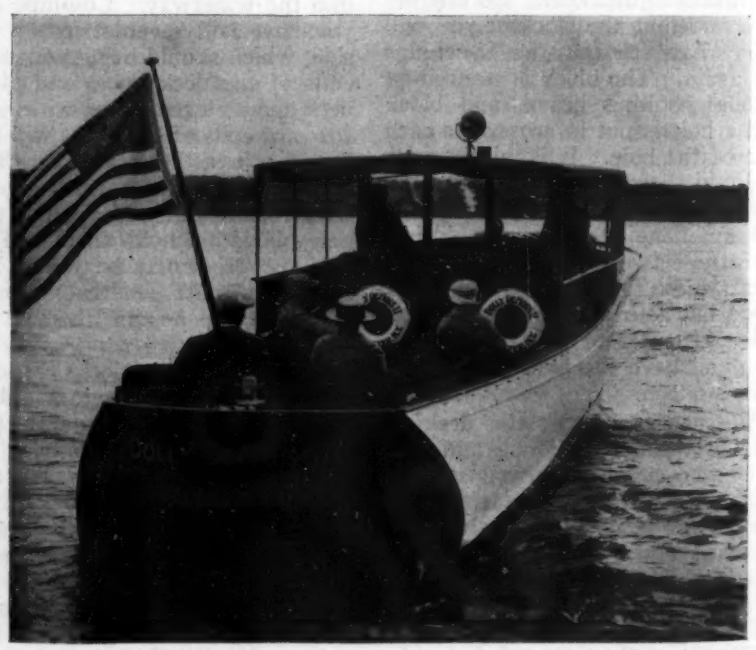
A Shallow-draught Forty-foot Express Cruiser

A new cruiser for Mr. Lucius W. Robinson of Rochester, N. Y., to be used at Hobe Sound, Florida, has been designed and built by the Great Lakes Boat Building Corporation, of Milwaukee. This is the *Dolly de Moss II*, a 40-footer, developed from special designs to produce a seaworthy and comfortable express cruiser, providing ample accommodations for extensive cruising at a fair turn of speed and embodying every desirable feature, including shallow draught for Florida use.

The new boat is of the modified V-bottom type with semi-tunnel stern which gives a draught of only 24 inches. The accommodation plan provides a very comfortable main cabin done in natural mahogany throughout, with box spring cushions handsomely upholstered. The seat arrangement is worked out to provide four separate berths at night. The galley has ample lockers, dish racks, a built-in ice box, sink and alcohol range with oven. The bridge deck is unusually large for a 40-footer and is very well arranged, with a comfortable athwartship seat, windshield and canopy top with side curtains. The cockpit has a lazy-back seat across the stern and four comfortable wicker chairs. The cockpit canopy is a special portable type, easily removed when it is desired to fish.

The power plant is a six-cylinder Model GR Sterling engine which gives the boat a speed of 22 miles an hour. All the engine controls are carried to the helmsman's position on the bridge deck for one man operation.

This boat was delivered to Mr. Robinson at Palm Beach, on January 1st, last.

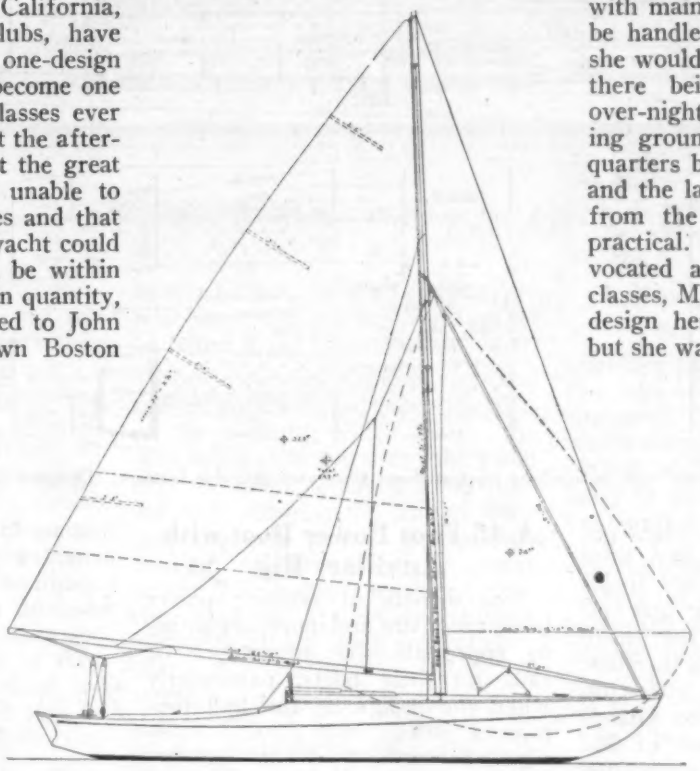


Dolly DeMoss II has a comfortable, well protected cockpit with lots of room in it.

An Inter-Club One-Design Class for 'Frisco Bay

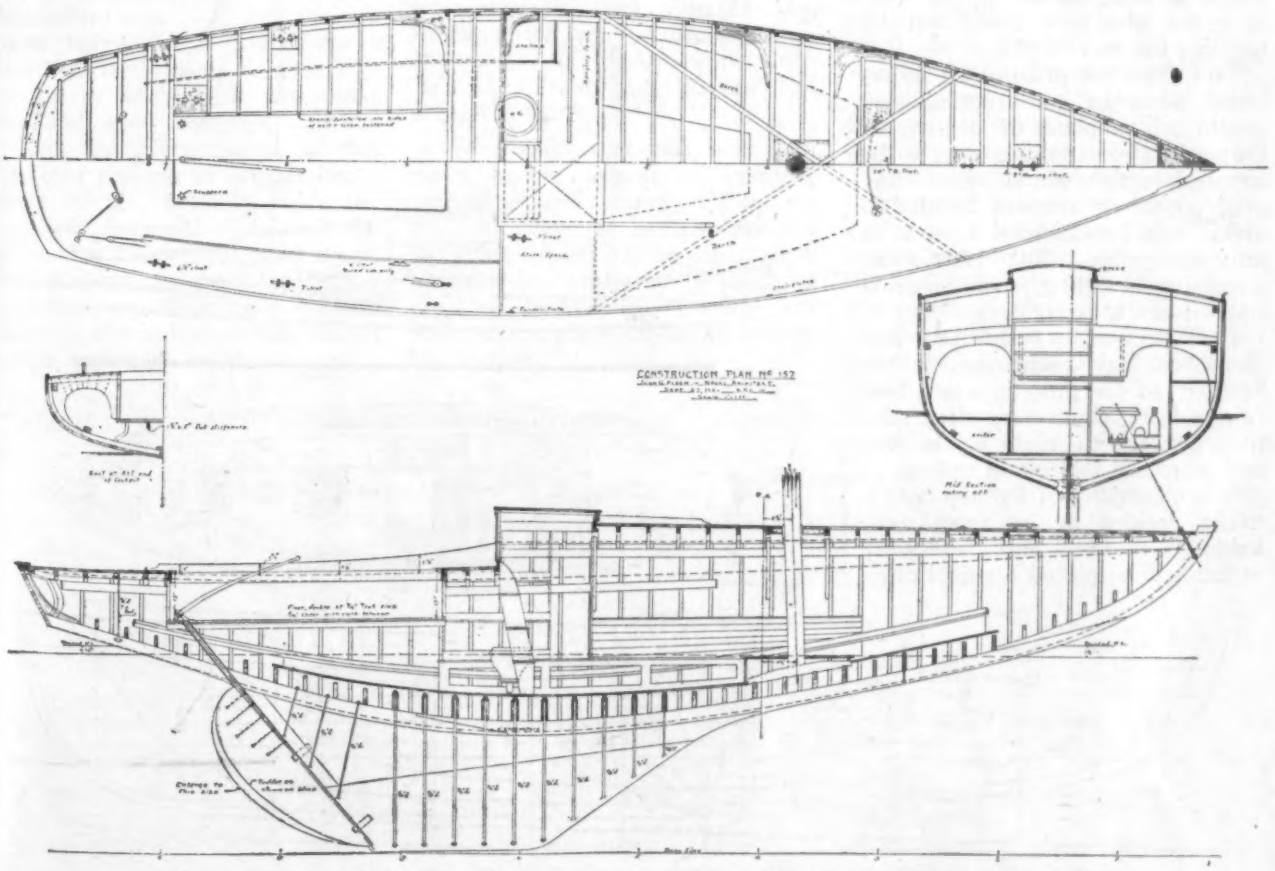
A PROJECT that will do much to popularize yachting has been successfully launched at San Francisco. The entire yachting fraternity of Northern California, comprising six yacht clubs, have adopted an inter-club one-design boat which bids fair to become one of the most successful classes ever organized. Realizing that the aftermath of the war had left the great majority of enthusiasts unable to build to the larger classes and that an ideal type of smaller yacht could be evolved which would be within their means if produced in quantity, the problem was submitted to John G. Alden, the well known Boston Naval Architect, last Autumn.

The conditions usually encountered on San Francisco Bay and vicinity are a twenty to twenty-five mile breeze accompanied by a lumpy sea, which varies according to tide. Under the lee of the high shores heavy knock-downs are experienced which ordinary racing gear would never stand. These necessitate a powerful little craft of moderate rig, large enough to be comfortable and to take care of herself. For day sailing, perhaps singlehanded, simplicity of rig was essential and the jib-headed, or Marconi rig, solved the problem, with main and jib halyards only to be handled. As a day boat alone she would not be popular in Frisco, there being too many beautiful over-night and more distant cruising grounds to visit. Comfortable quarters below had to be provided, and the layout, as will be observed from the drawings, is ideal and practical. To please those who advocated a boat to fit one of the classes, Mr. Alden was requested to design her to measure in class S, but she was to be a real "he" S-boat, and the most important requirement was that she be an ideal small fast cruiser.

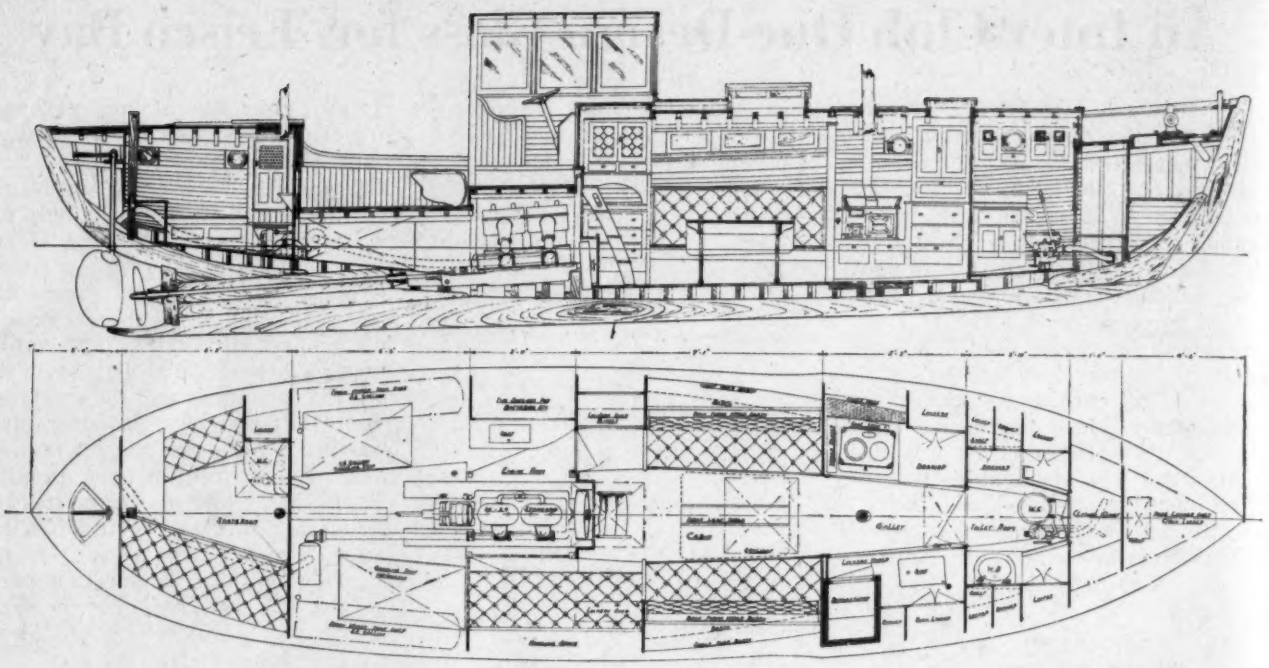


The dimensions of the little sloops, which are of the raised deck type, are: 30' 1" over all; 22 feet water line; 7' 8" beam; 5 ft. draught; lead keel 3600 lbs.; sail area 400 square feet.

Having obtained the drawings, representa-



A husky, raised deck class "S" boat designed for the hard breezes of San Francisco Bay by John G. Alden



A 45-foot power cruiser with an auxiliary rig that shows some very desirable features. Designed by Gordon Munroe.

tives from each yacht club got together and ten-minute-men were in attendance at all club meetings to awaken interest and instill enthusiasm among the entire membership of all the yacht clubs. To obtain further active inter-club interest, it was decided to finance the first boat by the sale of $10 tickets or shares. The contract for the first boat, including the templates of subsequent boats, and the building tax was $2,610.

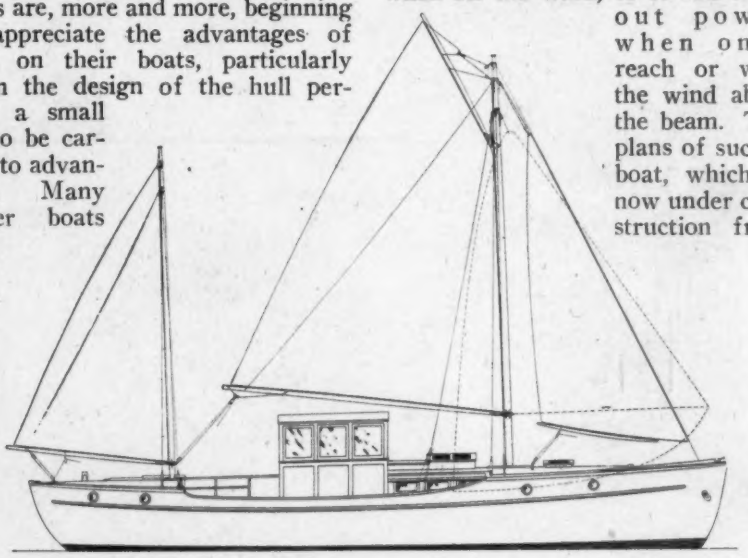
To reduce the price of all subsequent boats an indestructible keel mould and templates of all parts of the yacht's construction were to be supplied, which would permit any professional or amateur builder to obtain the knock-down boat at a uniform price. The restrictions governing scantling, spars, rigging and sails are to be rigidly adhered to.

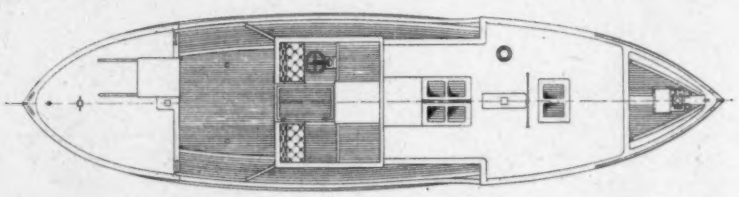
F. C. Brewer, an enthusiastic San Francisco Bay yachtsman, is the "father" of the project, which bids fair to bring about very close relations between the clubs on the Bay and increased interest in sailing.

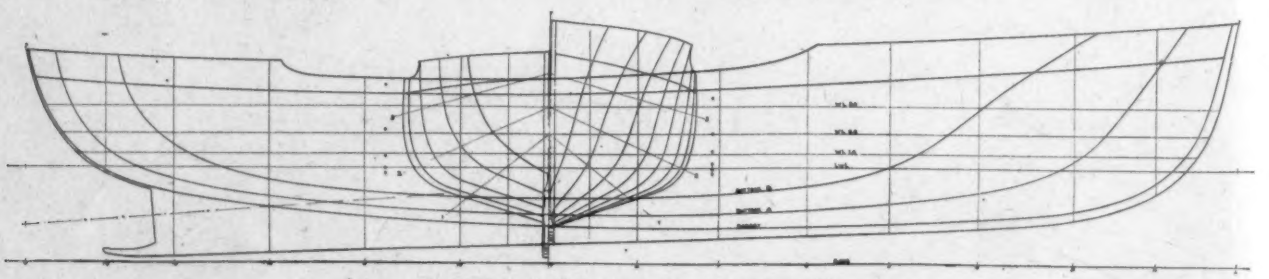
The ownership of the first boat is to be decided by lot from those holding shares, and additional orders will be placed for duplicates.

A 45-Foot Power Boat with Auxiliary Rig

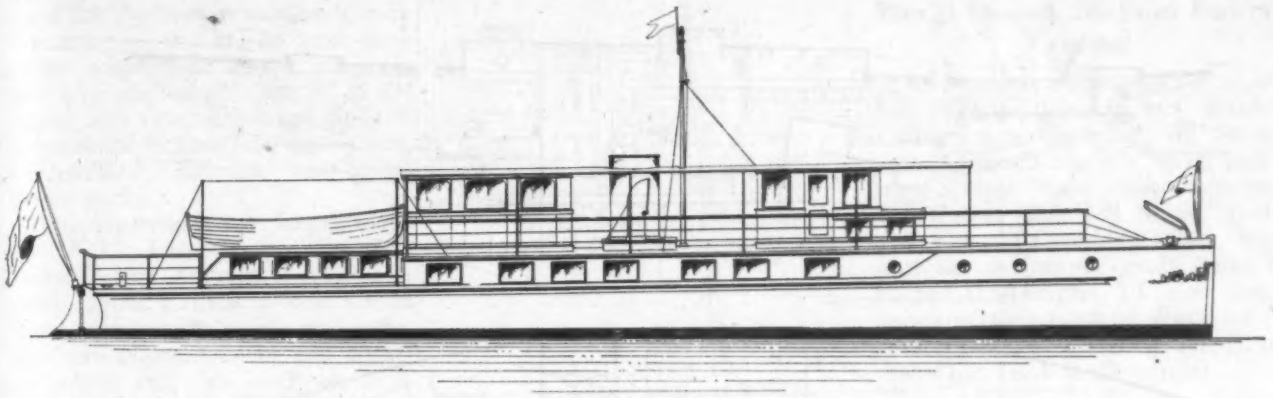
The owners of cruising power boats are, more and more, beginning to appreciate the advantages of sails on their boats, particularly when the design of the hull permits a small rig to be carried to advantage. Many power boats that are in existence today would be benefited by carrying a rig of enough area to give the boat a "lift" when off the wind, or to sail without power when on a reach or with the wind abaft the beam. The plans of such a boat, which is now under construction from







Lines and sail plan of 45-foot power cruiser with auxiliary rig.



An 80-foot express cruiser with all the comforts of a houseboat, from designs by W. H. Millett.

designs by Gordon Munroe of Boston, are shown herewith and are most interesting. Her designer writes as follows concerning the plans:

"I believe one of the best signs in yachting today is the growing trend to the auxiliary. Nearly all new designs of cruising sailing yachts call for an auxiliary motor. This combination has become very popular, and justly so. But I believe the motor boat with auxiliary sails will in time become just as popular. While we occasionally see one now, as a rule the rig is of very small area, or is installed as an afterthought. This, while a step in the right direction, prevents obtaining the full benefit of the type, which to my mind offers great possibilities."

The lines of this boat show a form that lends itself very well to the use of sails, with long, easy lines and good bearings, and the designer has given her a rig that will be of real use in any kind of a breeze except, possibly, with the wind well forward. She was designed for New England coast cruising, with safety and comfort the prime essentials, and she has many attractive devices that should appeal especially to those yachtsmen who are fond of sailing yet who seek the greater comfort to be found in the cruising motor boat.

Some unusual features are the sunken deck forward; the extension of the skylight, which houses the companion slide and door; the hatch over the motor which is lower than the deck, allowing the height of the deck house to be kept down while holding full headroom to enter cabin. The motor is separated from the cabin by a door and hinged partitions, giving quick access to any part.

The construction is rather heavy, with a 5" keel, heavy frames, 1⅛" planking and 1⅜" main and cockpit deck. The general dimensions follow: Length over all, 44' 7"; length water line, 40' 1"; beam extreme, 11' 2"; beam water line, 10' 0½"; draught, 3' 4", and sail area, 443 sq. ft.

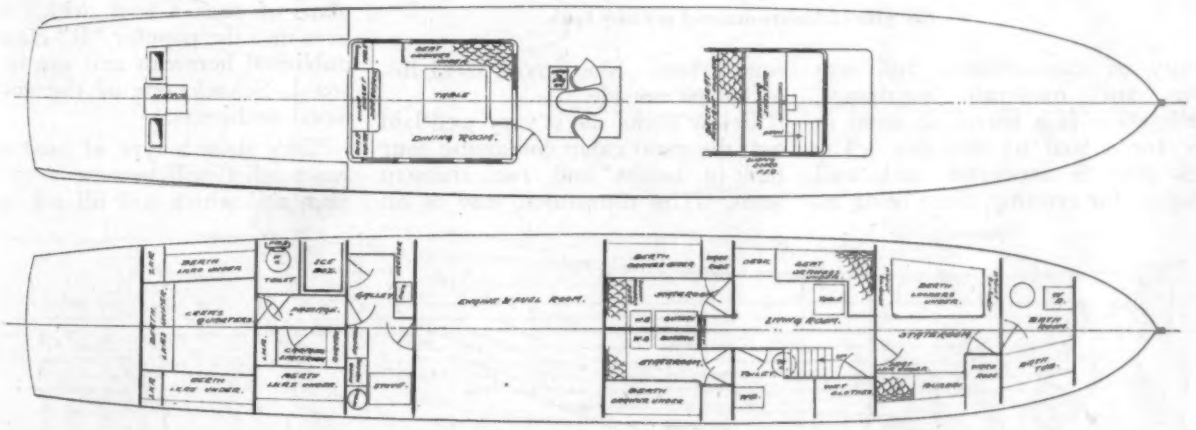
We predict that this boat will make a big appeal to cruising yachtsmen, and not only will the rig add enjoyment to her use but the jigger or mizzen will be found most useful when anchored in small or crowded harbors in keeping her from sheering and sailing all around her anchor.

A Novel 80-Foot Express Yacht

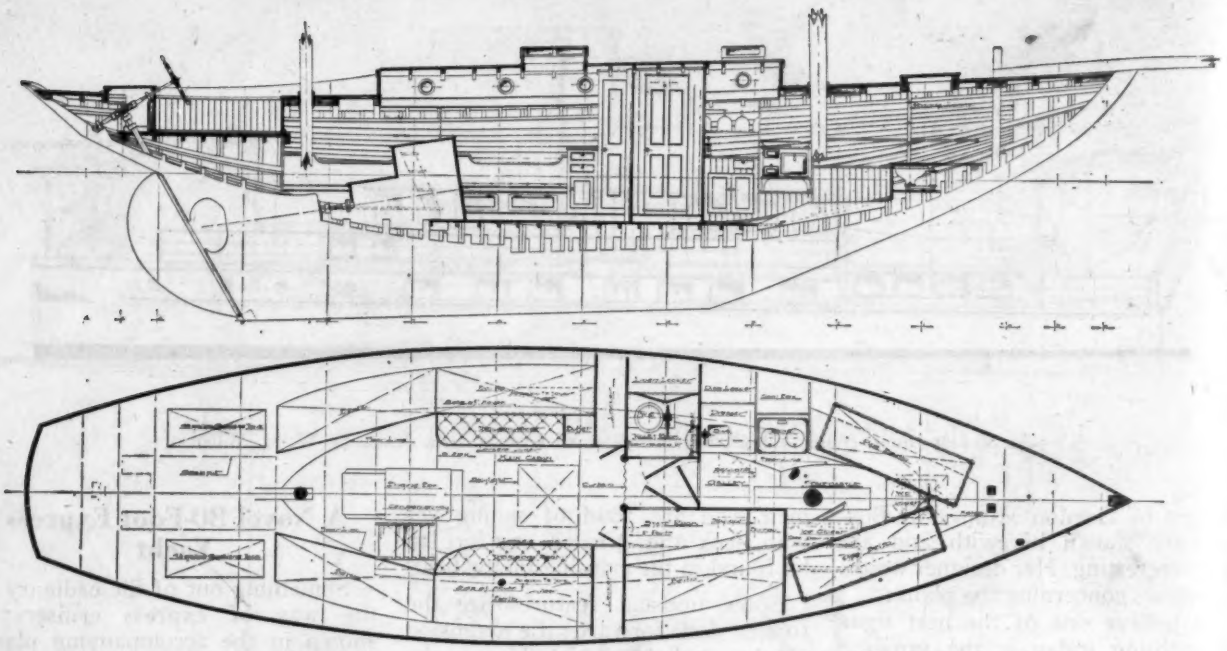
Something out of the ordinary in the way of express cruisers is shown in the accompanying plans, which are from the board of W. H. Millett, of Atlantic, Mass. She combines to an unusual degree the advantages of a houseboat with those of the fast cruiser, and while her form is such that she can be driven easily without excessive power, she has at the same time, the accommodations and the deck houses that one looks for only in the out-and out power house boat.

She has a straight sheer with square windows to the cabin and engine room, insuring plenty of light and ventilation, while there is a forward deck house containing the steering gear and engine controls, in the after end of which is a sheltered deck seat, facing aft. The after deck house contains a dining room.

The quarters below consist of three good staterooms, two bath rooms and a large living room. The engine compartment and space for the fuel tanks are amidships, while the crew's quarters are aft. Her length is 80 feet; beam 14 feet 6 inches and draught 3 feet 6 inches.



Deck and accommodation plans of 80-foot express cruiser.

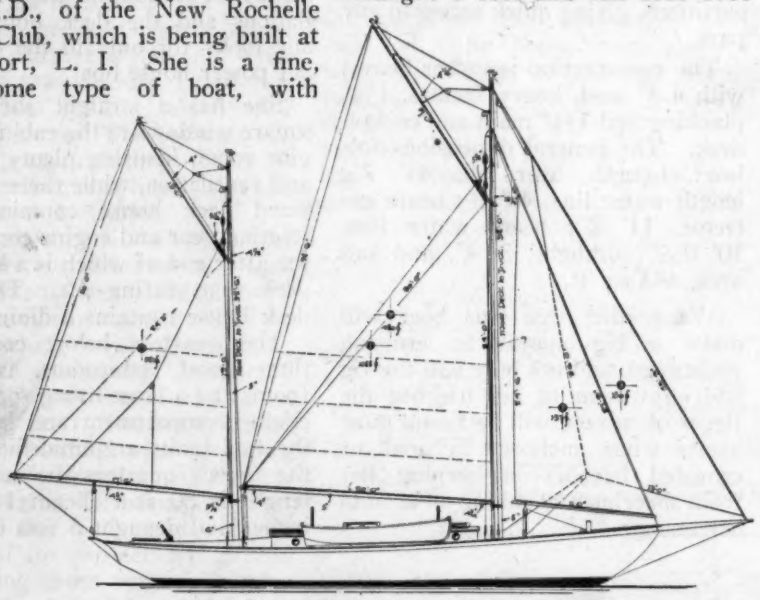


Accommodation plan and inboard profile of 35-foot auxiliary ketch designed by C. D. Mower.

A 35-Foot Waterline Auxiliary Cruising Ketch

Here is a fine, roomy, cruising ketch 35 feet on the water, designed by C. D. Mower for Henry H. Morton, M.D., of the New Rochelle Yacht Club, which is being built at Greenport, L. I. She is a fine, wholesome type of boat, with plenty of displacement, full sections and moderate overhangs, while there is a barrel of room in her for a boat of this size. The sail plan is moderate and well adapted for cruising, there being no spar on her, outside of the masts, over 20 feet in length.

Her dimensions are: length overall 46 feet; water line 35 feet; extreme beam, 12 feet 2 inches; draught 6 feet and sail area 1088 square feet. She carries 6943 lbs. of ballast outside.



Sail plan of Mower-designed auxiliary ketch.

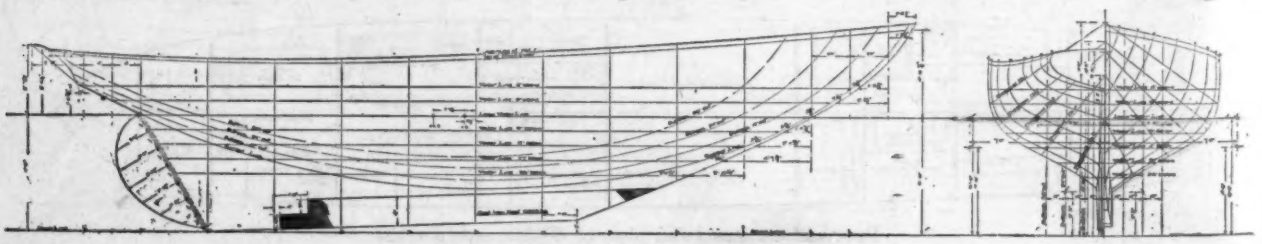
Below decks she is very well laid out, the main cabin containing four built-in berths and two transom seats. The companion way is off center and comes down alongside of the box over the engine. At the forward end of the cabin are two large clothes lockers. Forward of this main cabin is a stateroom, on the starboard side, and a toilet room on the port side with a passageway between the two. The galley is large and well arranged, being mostly under the cabin house, while there is room forward for two pipe berths.

The power will be a two-cylinder Lathrop engine of 16 h. p. which will give the boat a speed under engine alone of about 6 miles per hour.

A Class "R" Cruiser

A Universal Class cruising boat is something that one doesn't see very often, especially if she has auxiliary power; yet some of the smaller classes are very popular with yachtsmen who want a racing boat in which they can cruise with a considerable amount of comfort. The plans of such a boat, which measures into the popular "R" class, are published herewith and are by Edson I. Schock, one of the younger naval architects.

They show a type of boat which we predict will become very popular, and which will fill a long felt



Lines of 35-foot water line auxiliary ketch.

need for the man who likes to race on occasion, and at the same time wants a boat that he can cruise in and live aboard of. She is of the raised deck type, which has much to recommend it, both for simplicity of construction, strength and room below decks.

The dimensions are: length overall 37′ 7″; length water line 24′; beam 9′ and draught 5′ 7″. The cabin layout is unusual and shows three comfortable transom berths, an enclosed toilet room and a galley where one can work comfortably without being all cramped up. There is 5′ of head room in the main cabin, which is ample in a boat of this size.

Underneath a small bridge deck and behind the companion steps is installed a 3 H.P. Gray motor which will knock the little boat along at a good speed in a calm. The engine is out of the way and yet is powerful enough to answer all the needs of a boat of this character. The boat has a Marconi rig with practically a straight mast, raked slightly aft, the sail area being 594 sq. ft. The construction is the best, being about 15 per cent. heavier than required by the scantling rules.

Below decks the main cabin is finished in white with mahogany trim, the galley being finished in light grey, while skylight, hatches and coaming are of mahogany. She is exceptionally roomy for an "R" boat.

Sail plan of cruising auxiliary sloop which rates in class "R."

Orienta Yacht Club Elections

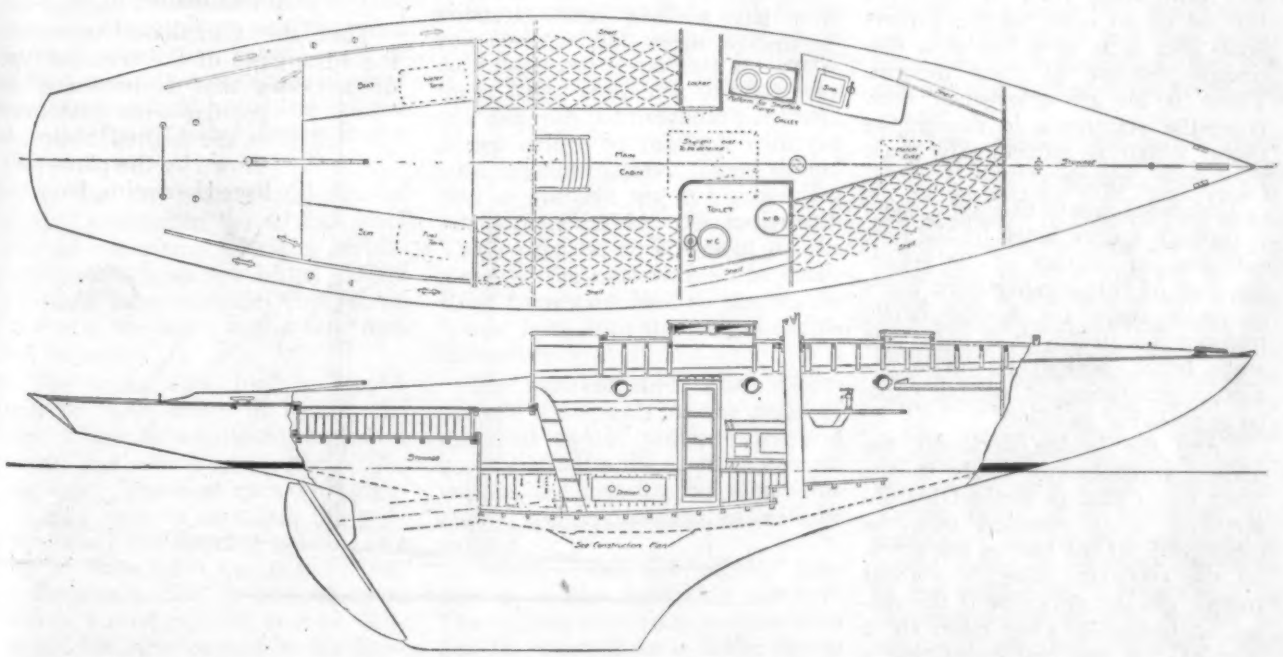
At the annual meeting of the Orienta Yacht Club the following officers were elected for 1922: Commodore, E. Lascaris; Vice-Comm., A. L. Snow; Rear-Comm., W. R. Halsey; Treasurer, M. J. Hall; Secretary, J. A. Haggerty; Trustees, W. S. Yale and R. C. Simpson.

You'll Do—A 50-Foot Power Cruiser

Just completed at the yards of her designers, the Luders Marine Construction Company, of Stamford, Connecticut, is a smart looking 50-foot day cruiser named *You'll Do.*, built for A. W. Murphy, Esq., of Cleveland, Ohio. She is rather an unusual craft, being a happy combination of the good points of such boats as *Kathmar I, Janice, Cero,* and *Victory* that go to make the ideal single-hander.

In the first place, the owner wanted some speed. This meant first, a fairly powerful engine, and after careful consideration a six-cylinder GM 5¾″ x 6½″ Sterling dual valve motor of about 125 H.P. was chosen. As the boat carries no unnecessary weight, though very substantially built, a speed of 16 to 17 miles per hour is assured. The engine will be controlled entirely from the helmsman's position, at the forward end of an unusually large bridge deck. The beam is ten feet six inches and the draught is 3 feet, the freeboard being rather more than usual while she has the plumb bow and flaring topsides characteristic of all Luders productions.

Abaft the chain locker is the owner's stateroom, a roomy and comfortable compartment with its



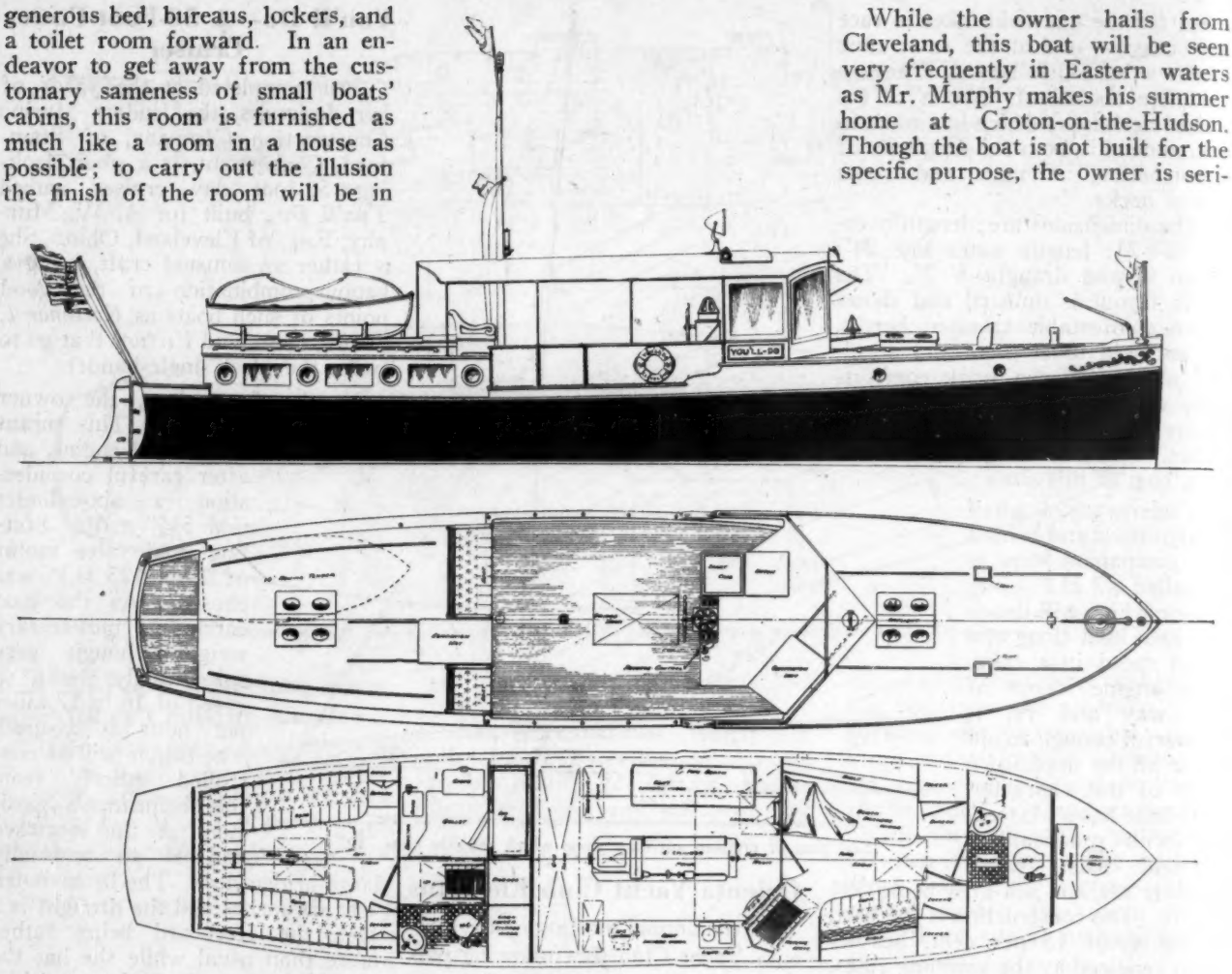
Accommodation plan of 24-foot waterline class "R" auxiliary cruiser. Designed by E. I. Schock.

generous bed, bureaus, lockers, and a toilet room forward. In an endeavor to get away from the customary sameness of small boats' cabins, this room is furnished as much like a room in a house as possible; to carry out the illusion the finish of the room will be in two tones of parchment with a touch of color decoration here and there. Electric fixtures will be distinctly of the shore type. This room has a diagonal companionway from the main deck, such as has been utilized on so many of the Luders boats that it is now almost a distinctive feature of their designs. There is an air emergency door from the stateroom to the engine room, which is immediately abaft the owner's quarters.

The usual access to engine room is through a deck hatch on the port side and on account of the generous size of this compartment there is ample room for a pipe berth, transom seat, toilet, wash basin and work bench, besides the main engine, a generating set and an extra large tank for gasoline.

From the bridge deck aft the main companionway leads to the after cabin and is flanked by observation seats recessed into the cabin roof. At the foot of the stairs, on the starboard side, is a toilet room. On the port side is the galley, an unusually large room for a boat of this size and containing a dresser, range, dish rack, and a generous ice box capable of holding close to 400 pounds of ice. This cabin is also an unusually large room, ten feet in length and almost the full width of the boat; it is finished entirely of selected mahogany and has a sofa seat extending around on three sides.

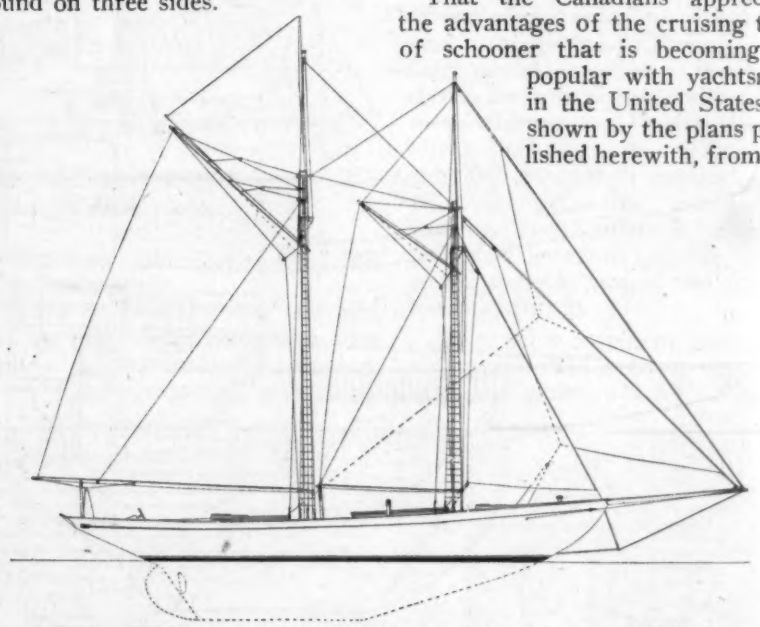
While the owner hails from Cleveland, this boat will be seen very frequently in Eastern waters as Mr. Murphy makes his summer home at Croton-on-the-Hudson. Though the boat is not built for the specific purpose, the owner is seriously considering entering her in the Block Island and Long Island Championship Races next summer.



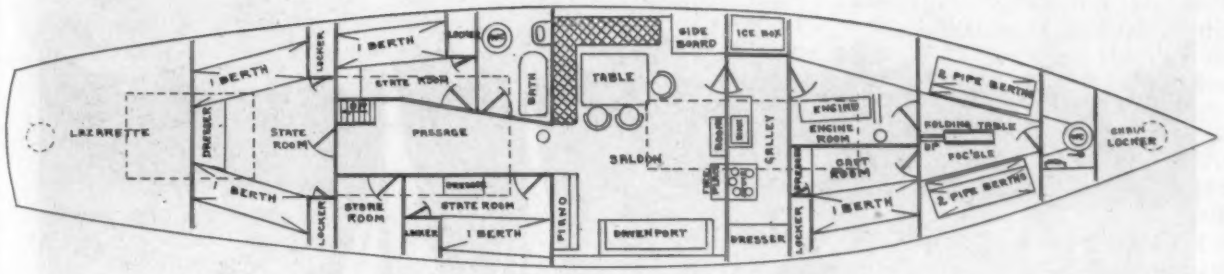
Plans of *You'll Do*, a 50-foot cruiser designed and built by Luders Marine Construction Co.

An Auxiliary Cruising Schooner

That the Canadians appreciate the advantages of the cruising type of schooner that is becoming so popular with yachtsmen in the United States, is shown by the plans published herewith, from the



Sail plan of 70-foot overall cruising schooner designed by I. L. McKenzie.



Accommodation plan of a 70-foot overall cruising schooner.

board of I. L. McKenzie, N.A., of Hamilton, Ont. They show a 50-foot waterline cruising schooner of the so-called fisherman type, 70 feet long overall; 15 feet extreme beam and of 7 feet 6 inches draught. The ends are somewhat longer than in the regular fisherman type and the draught not quite as great in proportion, but for cruising on the Great Lakes or on the seaboard, she is an unusually fine little vessel.

There are two deck-houses, the main mast coming up through a flush deck. The quarters below are well arranged and give one double and two single staterooms and a comfortable saloon. The engine is to be located forward and will be a 4-cycle 40 H.P. motor.

The yacht has fitted topmasts instead of pole masts, which in a vessel of this size has some advantages, as light sails can be clewed up or stowed when it breezes without the necessity of reefing or handing the lower sails.

What the Model Yachtsmen Are Doing

Conducted by J. O. BERG, M.E.

The Sailing of Miniature Yachts

Now that an international race for miniature yatchs is looming up in the offing, it behooves those model yacht sailors who, having gained proficiency in the art of sailing on enclosed waters of the run-around kind, to familiarize themselves with the methods of sailing from skiffs, before they enter the preliminary contests, which will eventually determine which of the boats is the fastest and will be chosen to defend the trophy.

In the selection of the defender the committee will undoubtedly take into consideration not only the speed of the yacht, but should two or more boats prove exceptionally fast the form and ability of the skipper may be the deciding factor in the choice.

By far the greater majority of model yachtsmen have had only limited experience in racing miniature yachts from row boats. Many of them have no experience at all so that a few hints at this time may not be amiss.

The actual race for the trophy will be three miles in length, the first a beat to windward, around a mark, and return across the finishing line. The next race is triangular, one mile to each leg, the next windward and leeward again. Two out of three takes the prize. Now, a three-mile race in a good blow will be a good pull for anyone. The actual distance covered by the oarsman will be four miles or more, so that each contestant must see to it that his physical condition is right to meet the strain.

It would be well if the individual clubs in running the eliminations at first schedule their races over shorter distances, say one and one-half miles, increasing gradually until at the end a full 3-mile race is run. The individual should practice whenever possible, rowing slowly at first, a regular stroke, so that the muscles limber up after a winter of inaction.

One of the requisites for outside sailing is a good skiff. One similar to that shown in the July, 1921, number of YACHTING is of the best. It is a boat developed for the purpose. It should be fitted with closed row locks, either straight or spoon oars not over seven feet in length, these being leathered so that they will not trail out overboard and will fit the orifice of the lock with the least amount of play. There should be a secure foot rest at a proper leg reach distance for the individual. There need be no comment on the speed of the miniature yacht itself. Each contestant has, no doubt, the fastest boat until the judges decide differently.

The aspirant must also inform himself thoroughly in the rules of the road and in sailing rules, and how he handles his yacht in general will be the measure by which his ability and sportsmanship will be gauged.

Outside races are usually conducted in the following manner: The regatta committee posts written general instructions as to the course at least one hour in advance of the race, giving special directions if required. A starting line is created between two bouys or boats and other markers placed at the designated distances. A warning signal is made 15 minutes before the starting is given, followed by a preparatory signal, made three minutes before the starting signal. Then the starting signal is made and for two minutes thereafter the crossing time of each yacht is taken. A yacht crossing prior to the starting signal must return and recross. All yachts crossing after the two minutes have elapsed sail on flat time. The signals are usually 3, 2 and 1 blasts of a whistle for the respective signals in the order given above. On crossing the finish line, the time of each yacht is taken and the elapsed time for each computed, the one making the fastest time being the winner.

Where models are sailed from skiffs they are handled very much in the same way that large vessels are handled. In first putting overboard, haul in the main sheet to the close haul position, cast off the jib sheet and if the tide is not strong push her off from the float; she will then heave to and remain more or less in one place while the skiff is being prepared and put over.

The proper method of approaching the model is dependent somewhat on what it is intended to do. To go about, it is easiest to approach on the lee side, putting the model about by grasping the stern or the main boom. When making alterations in trim it is handier to approach on the windward side. The sailor, however, should become proficient in approaching from

Following miniature yachts in skiffs. Right-of-way is as important in model sailing as in sailing large yachts.

either side to put about or trim sails. In going to windward the oarsman should keep a position a half boat-length astern and to leeward, where his position is such that he may reach his yacht in a short time, but is not so close that the suction and eddy produced by the oars will affect the speed of his yacht.

In running free or before the wind the oarsman should be on the opposite side from that on which the model is carrying her main boom and abreast of the model, some distance away so that she is not subjected to the swash of the oars.

In the picture herewith the white boat is being approached to retrim, the black one to be put about. Of course every man has ideas of his own, but the above methods are accepted practice and the beginner should use them. They may be modified when proficiency has been attained. Conditions will sometimes arise when a yacht must be put about from the windward side, so that either way should become handy to the sailor. A tow line is usually used in taking the model from place to place, when it is not desirable to sail it.

For those not acquainted with the rules of the road the following brief summary is given. They are the racing rules of the Model Yacht Racing Association of America, and are a modification of the international rules of the road to apply to miniature yacht racing only. The sides of a vessel are taken as tho' looking forward, the right hand being the starboard side, the left the port side. A vessel is said to be on the starboard tack when the wind is blowing against her right or starboard side and on the port tack when it is blowing against her port side. A vessel is considered free when the wind is over her stern.

Sailing Rules for Outside Sailing

Adopted by Model Yacht Racing Ass'n of America.

1—A yacht shall be amenable to the racing rules from the time the preparatory signal is made, and shall continue so until she has passed entirely across the finish line.

2—A yacht is said to be free when the wind is over her stern.

3—A miniature yacht running free has the right of way over yachts on any other point of sailing, and the skipper of the latter must see that the former yacht has a clear passage. Failing to observe these rules, and should a collision occur, the offender will be disqualified. (This rule is different from the rule for large yachts, because sailing before the wind is the most difficult point for the model.)

4—When two or more yachts are free or both have the wind aft of the beam the yacht with the boom on the port side shall have the right of way.

5—A miniature yacht sailing on the starboard tack has the right of way over those sailing on the port tack. Therefore, if a yacht on the port tack fails to clear the yachts on the starboard tack, so that they come together in collision, this will constitute a foul and the former boat will be disqualified.

6—In case two or more yachts are on the same tack and the boat to windward is making leeway or yawing so that in time it will come in collision with the leeward boat, the windward craft must be put about on the other tack before the collision takes place, except when rounding a mark and an overlap has been created so that the windward boat has no longer a choice of course; upon hail for room by the windward sailor then the leeward boat shall give way, and failing to follow this rule the offender will be disqualified.

7—A yacht overtaking another shall keep clear as long as she is said to be creating an overlap. Two yachts sailing the same or nearly the same course are said to be overlapping when either yacht has no longer a free choice on which side of the other she shall pass.

8—Yachts must turn a mark absolutely clear and in case any emerged part of the model or rigging touches any part of the mark or flag, said model must round the mark again in the proper manner and in the same direction as it originally attempted to turn.

9—When a yacht is approaching a shore, shoal, pier, rock, vessel, or a dangerous obstruction other than a mark of the course and cannot go clear without fouling another yacht, then the latter shall, upon hail by the sailor of the former, at once give room; and in case one yacht is forced to tack or bear away to give room, the other shall also tack or bear away as the case may be and as near the same time as possible without danger of fouling.

10—There will be no penalties for touches, but when a skipper goes aboard of his craft to trim or put about, he must row up to his boat gently, or at the same rate of speed that the model is making, so as to prevent giving momentum to the yacht other than produced by

her own power and any skipper towing, pushing or artificially increasing the speed of his boat in any way whatever, while sailing in and, particularly, while rounding marks, will be considered an offender and disqualified.

11—Any member sailing in a race may protest any other yacht so sailing for a violation of these rules. Intention to protest must be made known to the judge and the Regatta Committee verbally before the expiration of one hour from the finishing time of the race, and supplemented by a written statement of fact sent before 6 P.M. of the next week day following the race.

Model Yachting in the Pacific North West

By MARCO POLO

I landed in the Pacific Northwest the other day and found that a great many of the yachtsmen had taken up the game of model yachting, and I found this especially true in Tacoma, Victoria, B. C., Seattle and Vancouver, B. C., where quite a fleet of these miniature vessels will be afloat this coming summer, the greater portion of which seem to be in the C class under the rules as adopted by the Model Yacht Racing Association of America, due, I believe, to a challenge received from a model yachtsman of London, England, for a race this year.

In Seattle they appear to be building chiefly from designs by Mr. Geary and Mr. Wayland, while in Victoria they have about decided on the Geary design, and I understand they will soon be under way.

The Geary design is pulled out rather long in the ends, has a moderately flat floor, very thin where it turns into the keel and quite sharp on her water line aft, and will carry, I believe, the usual amount of sail, about 2,200 square inches.

In Vancouver I ran across Mr. Schock and found that he had also prepared the design for a model of the "C" class.

I inspected the lines of this boat, which I found to be of very easy form with a good rise of floor and ample width of keel. Her ends were moderate although with sufficient power, and the whole design struck me at once as being one of exceptional merit.

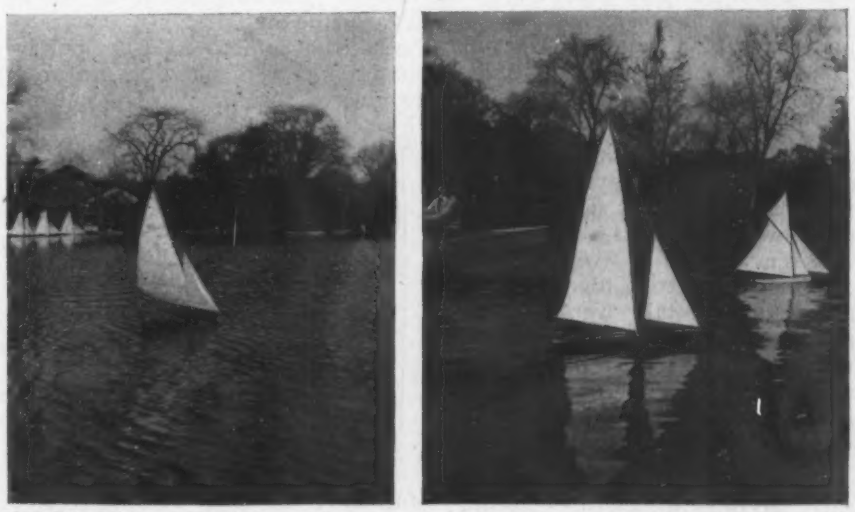
When starting the Model yacht game in Vancouver, it seems they started to build to the Universal Rule "R" class on a 1¼" scale, one boat by Mr. Winslow being built, but she did not prove successful as she was defeated by two model yachts built by the Cao Brothers, but since then I believe she has been altered by lowering her ballast and by adding about as much again as she originally carried.

Taking it all in all it looks like a very promising season for model yachting in this part of the country.

A Meeting of Old Rivals

An interesting meeting of two boats built in 1898 and raced together twenty years ago on Sunset Park Lake, happened when Mr. Charles Lucke's miniature *Sunset*, in a modern rig and apparently also somewhat rebuilt, sailed again with *Comet*, owned by Mr. Charles Wauker, both of the Prospect Park contingent.

Comet (white) retains her old style rig so that a fair comparison of the two types may be made, although *Sunset* would have a better appearance if her jib was cut higher and the rake of her mast was less pronounced.



Old Rivals Meet—The *Sunset*, with a modern Marconi rig, runs up against the *Comet* with her old rig, with whom she sailed 20 years ago.

Power Model Yachts

Under the caption, "A Hail to Model Power Boatmen," we gave the basis of a rule for arriving at a standardized method of classification for Model Power Boats, as expounded by Mr. Harry Johnson. No better time than the present could be found to formulate such a standarized rule, to take effect Jan. 1, 1923. Many of the boats for the present season are either built or building and it would hardly be satisfactory to change at this late date for this season.

Furthermore, a rule should be built around scientific principles and should be made to stand the test of at least two years before any change may be made. Therefore deliberation is certainly in order.

The initiative in matters of this kind must come from the men interested, so that Mr. Johnson's hail should warrant answers. For some reason the power boat men have found it hard to get together. Our personal observation has been that the discussions on rules usually wandered off into arguments as to special mechanical contrivances and how not to make them, how fast the next boat was going to be, and everything except facts based on data upon which to base a reasonable rule.

The writer made a proposal to form the 15-lb. displacement saturated steam class some five years ago, which was at first given the pitying smile. Nothing short of 30-miles-an-hour would do—result, two boats that went many miles less —and not often. In later years when the essence of the proposal was adopted, some ten boats appeared at the line and most of them got over it, though not all finished.

There should be a continuance of the speed class, without question, for the man higher up in the art; but of greater value is also the training of such men and this, particularly in power models, cannot be done overnight. The man with lesser ability and less money to spend on his sport may best gain a proficiency and be able to produce a speed model of merit by several years' racing in a restricted and standardized class of boats of comparatively low speed.

Our proposal would be for the model vacht clubs interested to select two committeemen, one informed on the problems of the hull and the other on the motive equipment. These men to form a rules committee and to meet under the

(*Continued on page 247*)

An Organization for Cruising Yachtsmen

FOR some time it has been felt by strictly cruising yachtsmen that there was no organization of national scope in this country which did anything for the cruiser, that in any way sought to promote interest in this branch of the sport, or that endeavored to encourage the development of suitable types of cruising craft and to stimulate interest in navigation and the handling of small vessels.

In England, one of the strongest yachting organizations is the Royal Cruising Club, which, with a limited membership, has done more for the man who likes to cruise than any other organization. American yachtsmen who have come in contact with this organization know its value to its members and what it has done for them by facilitating yacht and small boat cruising on all waters.

A number of American boat owners have been thinking along these lines for several years and now feel that the time is ripe for some such organization in this country. This has resulted in several of these cruising men getting together, some months ago, to talk over the advisability of launching such an organization, with ideals that would make it appeal to every cruising man who likes to poke the nose of his boat beyond the far horizon.

Among those who gathered at the early meetings were "Bill" Nutting, of the Typhoon; Sydney Breese; George Bonnell, who never used to stop short of Nova Scotia when he cruised in his old runabout *Old Glory;* Henry A. Wise Wood; "Marty" Kattenhorn, who, with his little schooner *Surprise* was one of the earliest to build to the fisherman model; Herbert L. Stone, L. H. Bakeland and Frank B. Draper. After several meetings and much communicating with cruising men who have done things, the outline of an organization, to be known as the Cruising Club of America, was drawn up, and at a meeting held on March 23rd the movement was formally launched.

The objects of the Club have been formulated carefully, and the constitution modelled somewhat after that of the Royal Cruising Club, as it was felt that the 40 years' experience of that organization had made it one from which much could be taken to advantage.

Briefly the objects of the Club are as follows:

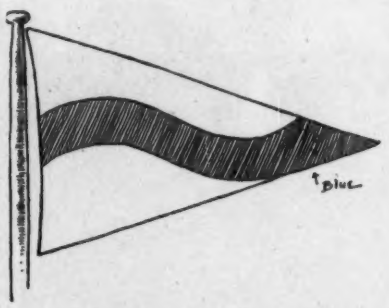
(A) To promote and facilitate cruising by amateurs.

(B) To encourage the development of suitable types of sail, motor and auxiliary craft for cruising purposes.

(C) To stimulate an interest in seamanship, and the navigation and handling of small vessels.

(D) To gather and keep on file all information which may be of value to its members in cruising in any waters.

These objects may seem broad and to some possibly a little vague; but this is not the case, as real work can be done along the lines laid down, and much benefit will result to the members and to cruising yachtsmen in all parts of the country, for the organization proposes to be national in scope and not purely local. Members must be prepared to give of their knowledge and information as much as they receive from the club if it is to grow as it should.



Burgee of Cruising Club

Much information concerning waters infrequently visited can be obtained, as well as considerable data of better known waters that is not contained in the coast pilot or in the government charts. It is proposed to gather and keep on file such information where it will be available to club members; it is planned to have discussions on and to try out various types of cruising craft, and above all it is expected that the organization will bring together, with a common purpose, cruising men the country over. Club trophies for unusual or noteworthy cruises will be awarded each year.

The requirements for membership are to be kept high, and this, it is hoped, will tend to serve as a stimulous and act as an incentive to the coming generation, not only to learn to handle and navigate their own vessels, but to build suitable types to gratify their longing to cruise in far waters.

Other parts of the constitution and by-laws which are interesting are the following:

MEMBERSHIP: Any amateur who has proved his ability to sail, handle and navigate a yacht or small vessel, shall be eligible to membership, subject to approval of the Membership Committee.

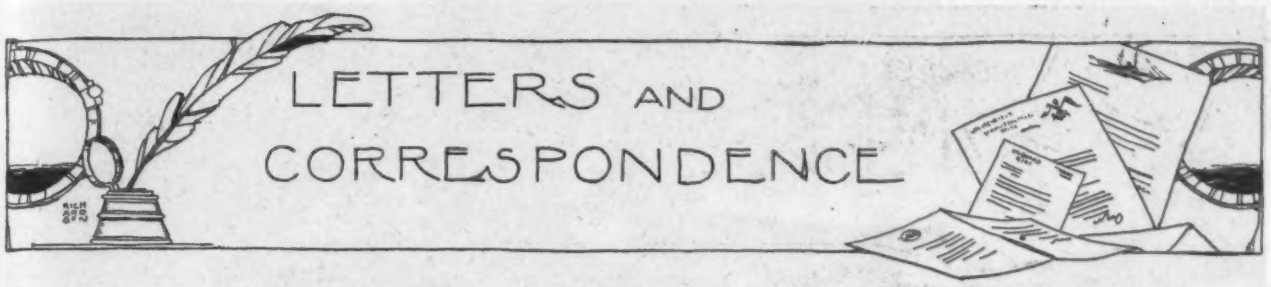
Duties of Members: Every member shall by the fact of membership, undertake to give and shall give every local information in his power to his fellow members, on application, and to that end shall, on admission, inform the Secretary of the coasts, rivers and lakes with which he may be familiar.

Classes of Members: There shall be three classes of members—regular, life and honorary members. Any member may become a life member by the payment of one hundred dollars and thenceforward he shall be exempt from all payments of yearly dues. Honorary members shall have no vote, but otherwise will enjoy all the privileges of regular members.

Admission of Members: Membership shall be by invitation only. Every candidate for membership shall be nominated by one member, and seconded by another, to both of whom he must be personally known, unless the committee shall, under special circumstances, dispense with such personal knowledge, and his name and address, and any other particulars the commitee may require, shall be sent to the Secretary,

Stations: The chief station of the Club shall be in New York City, but whenever four or more members reside in any locality they may found a station of the club therein, giving notice to the Secretary, who shall notify the other members of the Club.

The following is a list of the charter members of the organization: Sydney Breese, Frank B. Draper, Roger Griswald, J. J. Phelps, George P. P. Bonnell, James K. Brugler, Jr., W. W. Nutting, Henry A. Wise Wood, Aemilius Jarvis, M. S. Kattenhorn, Herbert L. Stone, Chas. G. Davis, John G. Alden, Coleman Tousey, Harold Peters, Frederick A. Fenger, W. H. Hand, Jr., Fred P. Thurber, Clifford D. Mallory, Samuel Wetherill, Ogden T. McClurg, F. W. Baldwin, H. B. Greening, J. W. Alker, C. D. Mower, A. D. Seymour, Jr., Charles F. Nield, S. S. Pierce, L. H. Bakeland, Walter A. Sullivan, T. F. Day, C. A. Marsland and Gilbert Grosvenor.



Beam, Bilges and Consideration for the Crew

Editor YACHTING:

In looking over the plans in some of the boating magazines I have been surprised at the apparent lack of knowledge on the part of the designers of certain boats intended for off-shore cruising as to the conditions that the boats will be called upon to meet, or that will be faced by the crew. There seems to be a tendency in some quarters to turn back to the slack bilge and narrow boat and away from the saner, more normal type of cruiser which we have been getting at last (after how many years of waiting) in the so-called fisherman model.

Now, the narrow, slack-bilged boat of V sections has its advocates and has done its part in the past in the doing away with the wide, flat-floored, shallow boats formerly developed in this country. But to go back now to the narrow, plank-on-edge boats with no bearing to speak of in the hull itself and depending for stability largely or entirely on ballast is a step in the wrong direction.

It is claimed that the narrow boat with easy, slack sections can be driven with less sail and is easier in a seaway, and, hence, easier on construction and rig than a wider boat with great initial stability that sails on her bottom and takes a big "patch" to drive her. True—as far as it goes—but it doesn't tell the whole story. Up to a certain point the smaller rig of a boat that gets down to her lines easily and sails on her side is efficient. but when it breezes up hard the lack of bearing lets her lie down so far that neither sails or hull are doing efficient work, the wind blowing off the sails and the boat lying down and reducing her lateral plane until she slides off to leeward like an ash scow. This is especially true in a heavy sea which one meets in outside work.

One of the small English plank-on-edge cutters of a number of years ago was lost for this very reason when she was caught in a gale and couldn't claw off a lee shore with the sail she could carry in the face of the heavy sea.

In addition to this, some consideration must be had for the crew in outside cruising. Now, a boat that is sailing on her side most of the time and is almost down on her beam ends when it blows hard, is not one that is easy on the crew, no matter how easy it may be on the hull. And let it be remembered that in almost every case of disaster it is the crew that plays out before the ship does. Keep the crew fresh, rested and fed and they'll keep the ship afloat. But on a boat sailing on her side it is hard to get around on deck in a strong breeze; it is hard to handle sail without getting washed overboard; when hove down the cockpit and lee deck are all awash, the boom is in the water, and the helmsman or crew cannot see to windward over the weather rail. Below it is no better. One cannot stay in his bunk, cannot walk except on the sides or back of the transoms, nothing can be kept on the stove and no food served for eating. Under such conditions the crew tire quickly and easily play out.

On the other hand, a hard-bilged, wide, full-body may be equally unsuited, being hard on the rig, bad in a head sea and hard to drive. But there is a "happy medium," such as has been struck by such men as Alden and Hand with their fishermen schooners, by Mower in some of his cruising boats and by the late W. J. Starr in his *Esperanza*. The sections of some of these fishermen type schooners are as easy and sweet as could be desired, with plenty of buoyancy forward, yet with easy entrance. They sail pretty much on their bottoms, yet they are easy to drive, they will carry sail and yet are not hard on their gear and, above all, they give the crew some comfort and a chance to do their work and get their rest—as much, that is, as is possible on a little boat.

After waiting for years to get as suitable a form as is now being developed for outside cruising, and putting up with some of the "lemons" that have been handed the unsuspecting yachtsman for a "cruiser," don't let us take a step backward with these narrow, deep, slack-bilged boats just because they don't take as much sail to drive them.

C. C.

Advocates Jib Headed Rig For Cruising

Editor YACHTING:

In prowling around Essington the other day, I ran across one of Simpson's *Sea Chest* cruisers being built. She was only partly planked, but gave every indication of being a shippy little craft, out of which her owner should get a lot of pleasure.

The design has not been strictly adhered to, inasmuch as the beam has been increased about 6 inches. This gives her quite a chunky appearance, and I am afraid she will be an indifferent performer to windward in choppy water. Her builder, Rasmussen, an old-time ship captain, told me he thought she would have been a much sweeter boat if built as originally designed.

I am very much in favor of the jib-headed rig for a boat of this size and type—not on account of any extra speed considerations, but on account of the extreme ease of handling the sail, and the saving of weight aloft. Reefing under way is a comparatively simple matter with this rig—I have seen boats reefed going dead before the wind—and was told by a friend of mine that the same stunt was worked on a 90-ft. ketch, in the Bay of Fundy, when it was so rough that to bring the craft head to wind would have made things hum, to say the least. The more this rig is used, the sooner people will realize its superiorities over the gaff rig.

Give us some more of the sane, substantial cruising type of boat—and let's hear what some of your readers think of the different rigs—not the theoretical bugs, but those who have tried them out, and know from experience.

SAMUEL WETHERILL.

The Belle Isle *Bearcat* opened up. Lord Auckland has been appointed Eastern sales representative of the Company, and the boats are being exhibited in New York.

Belle Isle *Bearcat* Exhibited in New York

The Belle Isle *Bearcat*, which created a lot of attention at the recent Motor Boat Show, is being exhibited alongside the Isotta Fraschini at 19 West 44th Street, as a result of the appointment of Lord Auckland as eastern sales representative by the Belle Isle Boat & Engine Company, Detroit.

The *Bearcat* has several points of interest. Not only is it an outstanding example of recent powerboat development, but more especially it is the first marine runabout to be standardized for quantity production. It is built like an automobile —by progressive assembly plan—at Detroit, the Capital of Motordom. She is powered with a 4-cylinder Hall-Scott of 125 H.P.

Lord Auckland, prominent in social circles here since his arrival during the war to supervise the purchasing and testing of aeronautical supplies for the British government, became enthused over the *Bearcat* when he saw it at the Grand Central Palace. After purchasing one for his own use, he became so enthusiastic as to take over the eastern distribution of the craft.

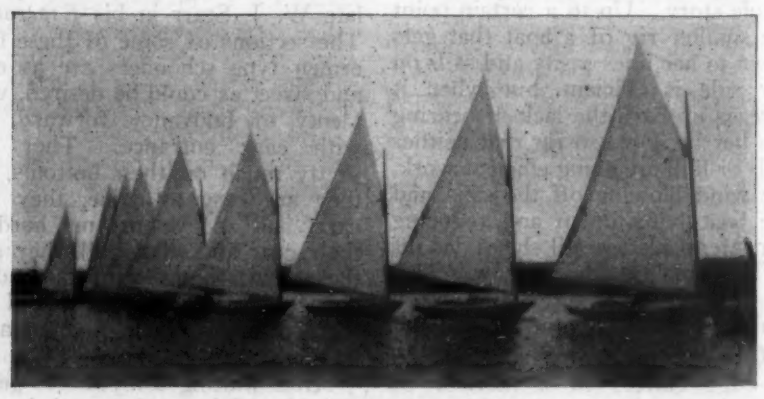
This is the first time that distribution of a "million-dollar" power boat has been attempted in New York along lines identical with the marketing of high-grade motor cars. In addition to the *Bearcat*, an Italian marine motor is on permanent exhibition by the Isotta Fraschini Company.

A 15-Foot Sailing Sneak Box

A little boat which attracted a lot of attention at the recent Motor Boat Show, and which will appeal to the small boat sailor, is a 15-footer designed and built on the lines of the famous Barnegat Bay sneak box, by J. H. Perrine of Barnegat, New Jersey.

These boats are decked over with a cockpit 7 feet long, giving plenty of room inside for the crew and passengers. The dimensions are 15 feet over all; 13 feet water line; 5 feet 7 inches beam, while the draught without board is only 6 inches and they will thus float on a heavy dew.

The floor is flat and the fore and aft lines easy. The boats are cat-rigged and carry about 156 sq. ft. of sail, and with this rig they are very fast. A great many of them are in use on the waters tributary to Barnegat Bay, and the Bay Head Yacht Club has adopted the boat as a one-design class.



Fleet of one-design Barnegat Bay Sneak Boxes, built by J. H. Perrine for Bay Head Yacht Club.

New Head of Marine Dept of Geo. B. Carpenter & Co.

Yachtsmen and power boatmen, especially those of the middle west, will be pleased to learn that Mr. J. W. Sackrider has been placed in charge of the Marine Department of Geo. B. Carpenter & Co., Chicago, as Manager. Mr. Sackrider has been with this organization for about twenty years, and during the last ten years has been closely identified with the Marine department as its chief outside representative.

Hall-Scott Appoints Palm Beach Distributor

The Hall-Scott Motor Car Co., Inc., through its Eastern Manager Arthur J. Utz, 885-895 Niagara Street, Buffalo, advise that they have appointed the Power Marine Ways Co. of West Palm Beach, Florida, distributors of this popular line of high class marine engines.

(*Continued on page* 248)

Sails

(*Continued from page 206*)

mentioned sailed with few or no stays to the mast and it is a coincidence that the fastest boats in the Star class are the ones with only one lower shroud a little over half way up the mast, leaving a limber spar that can whip and bend automatically, keeping the cloth under the right tension. The luff of the sail has a roach and in hard breezes the mast bends, assuming about the same curve, so the sail is practically flat, just as it should be in a hard blow. When the squall or breeze lightens, the mast straightens and throws a fullness or draft, as it is called, in the luff, and the sail has a more curved surface, which is desirable in light winds. Much of the success of this rig comes from selecting a spar that will bend true and tapering it so it will bend in a curve to match the shape of the sail. Stories were told me when I was a novice at sailing of how a certain successful sand-bag sailor would not have a mainsail unless there was fullness enough in the luff to enable him to wrap the slack cloth around the mast so that it would meet.

This fullness in a sail is advantageous to a wide beamy sloop and, in later years, when I used to race many of Capt. Tom Webber's big sloops, I saw a demonstration of this principle and at the same time got an idea of how to correct quickly a poorly fitting sail. We merely opened the strands of the bolt rope along the luff on the mainsail and wove in through it a thin rope. This had the effect of shortening the length of the bolt rope, making the sail more baggy, and it helped the sloop's sailing until a new sail could be obtained.

On the other hand, just to show that one must not jump at conclusions too quickly, but must use his brains in putting sails on a yacht, only this past Summer one of the New York Yacht Club "fifties," during the cruise, used a very baggy suit of sails and every time she struck a soft breeze she sneaked ahead like a ghost, but when it breezed up she fell behind. Those "fifties" do not shoulder themselves to windward by shoving a hard, bluff, bilge against the water under the lee bow, as a shallow sloop does. They go where they point but they have too big a lateral plane to ride out any to windward, and so they sail them trimmed flatter. With this big lateral plane under water to push against they

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can be trimmed so; but with a baggy sail they cannot lay within half a point of a flat sail, and this is enough to kill the baggy sail idea on these boats.

All these experiments were most exhaustively tried out back in the nineties, when a whole fleet was built and raced against the little English built cutter *Minerva*. I was at that time a novice and raced occasionally on the Gardner-designed *Liris*, a long-legged, heavily sparred forty-foot water-line cutter. Here we came to sails cut very flat, with wire luff ropes. We hove them up on winches until one could almost play a tune on the luff ropes. The skipper would keep tapping the luff rope with a winch heaver until it was tight enough to ring before he would let the crew stop heaving up the throat halyards.

To study sails intelligently, one must take into consideration everything and weigh the good points against the poor ones. A certain sail fits a certain shaped yacht, yet it varies every time the displacement or weight of the yacht changes. It varies according to the strength of the breeze and according to the sea she is sailing in, and as it varies it must be handled differently to get the best results out of it.

My best advice is that if one wants to know *anything* about sails he must study them—and keep on studying.

To the Banks on Mayflower

(*Continued from page* 196)

The crew found no trouble in getting forward and aft during the height of the gale. They simply watched their chance between the large seas and made a dash forward or aft. I pitied the cook as he had to stand up before a hot fire and prepare soups and other eatables for the ever-hungry crew. I cannot imagine how he worked.

Sunday morning broke with no change in the weather except that the wind had changed to north-northeast and blew just as hard from that direction. The seas had increased, if anything, and we realized that we were in for another day of test on gear, hull and good nature. At noon the wind eased off a trifle. The skipper ordered the ship about on the other hitch. We made one attempt and did not succeed. There was a slight lull in the gale, a boom tackle was ordered on the boom and the skipper said that we must jibe. Taking a good chance between the puffs he made an easy jibe.

(*To be concluded*)

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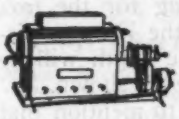

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For a Power Boat Division

(*Continued from page* 223)

auspices of the Model Yacht Racing Ass'n of America. After the rule has been formulated this committee would disband as the Association is qualified to handle the races by creating a Power Boat Division. It would not be advisable at this time to add delegates to those already appointed. When the time for action under the rule has arrived, new delegates to the Association are to be appointed (for season 1923), then it may be necessary to add one who might represent the Power Boat Division.

To organize this movement have your secretary write John O. Berg, care YACHTING, 47 West 47th St., New York City, after you have brought the matter before your club and appointed delegates. The association meeting will not be called until there is evidence that, (1) a sufficient number of clubs are ready to give the matter attention; (2) that you have discussed the matter and formed an opinion as to what is desirable.

Why "Model" Yacht?

MODEL YACHTING EDITOR.

DEAR SIR: I wish to enter a strenuous kick on the caption heading of your section of YACHTING. I never could understand this "Model" yachting stuff. In a very few instances is it true that a "model" yacht is a model of a yacht, it is simply that the rank and file of miniature yacht sailors have got into the rut, as we are all so likely to do, and have perpetuated a name which does not in reality belong.

Now that we have a rational rule to steer our course by (and by the way that rule in itself makes each "Model" yacht a miniature yacht) why not be frank about it and call it such. HARD. A. LEE.

Right, brother, but the term Model Yacht has become pretty common and thus hard to change, like the name Marconi rig, but we are with you if your communication brings down a shower of censure for our shocking past.—M. Y. Editor.

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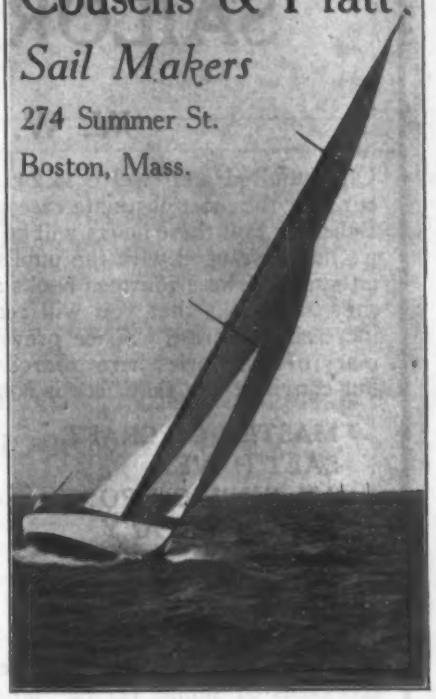

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Sea Chest

(*Continued from page* 214)

the bulkhead posts and either end of the deck opening.

In the next issue the details of finishing the cabin interior, painting and rigging will be taken up and the boat completed. It is easy work and can be done fairly quickly.

Full working plans of *Sea Chest* and specifications and bill of material can be had for $10, by writing YACHTING.

Author's Note.—Some have asked me for the drawings of a lead keel. This will be substantially the same as the drawing for the iron keel on page 80 of the February issue, except that the depth will be 3¼" instead of the 5" shown.

I have neglected to mention that the lines are given to the outside of planking and that the thickness of the planking must be taken off the moulds when they are laid out. To do this lay out the sections and with compasses set at the thickness of the planks, describe a series of circles using any point on the section as centers. Then run the batten in tangent to these circles and the resulting line will be the true shape of the mould. This allowance has been made on the patterns, and need not worry you.

(*To be concluded*)

Hall-Scott Appoints Distributor

(*Continued from page* 228)

This company is particularly well fitted for handling this class of business. The boat building plant, headed by Clive Merchant, designer and superintendent, is well equipped with modern machinery and equipment and has floor space sufficient to handle and build boats up to seventy feet rig. They will specialize, however, on small, fast cruisers, pleasure and fishing boats and runabouts for which Hall-Scott Marine Engines are so well suited.

Making a Power Boat Unsinkable

(*Continued from page* 200)

The gasoline and oil tanks would do the same, whether full or empty, and sufficient air bags to float the machinery should not weigh over twenty, or twenty-five pounds or very little more than the life preservers carried by the crew. At a trifling increase in weight the size of the compartments can be reduced and the number of air cells increased until it would be absolutely impossible to sink a boat no matter how badly shattered the hull might be.

Fitting-Out Time

(*Continued from page* 198)

they may go together again in their proper places. A small file or punch mark for a guide will answer. Also

provide a few boxes for the parts to go into, and don't scatter them all over the boat, for a lost nut or a section of pipe may put you to a lot of trouble. In removing gears of a 4-cycle engine, mark them so that when replaced the same teeth are in mesh, as their setting governs the valve timing.

The pistons, as well as the cylinder chambers, must be cleaned thoroughly to remove all traces of carbon. This may be done with carbon remover, by soaking in kerosene and scraping, or by burning out with an oxygen torch. The rings should be carefully removed and the junk grooves cleaned out. The condition of the faces of the rings can be taken as an index of their condition. They should be brightly and evenly polished. If any sooty marks are noted across the smooth metal these "blow marks" indicate worn rings and gas escaping past the piston. They should be renewed.

Bearings that are loose, due to ordinary wear, can be easily remedied by inserting a thin piece of sheet brass or copper between the bearing and its seat. By inserting or removing one or more of these "shims," the main bearing may be adjusted as desired. If the bearings are worn badly, new bushings will be needed to get a good adjustment, or the bearing may have to be babbitted. The latter operation *can* be done by the owner, but most of those that haven't the appliances handy will have it done by a machinist. Do not set up main or connecting rod bearings too tight. The slackness should, of course, be taken up, but they should be adjusted so that the weight of the rod when released from an upright position will cause it to rotate slowly.

In a four-cycle engine the valves will have to be reground so that they fit the seats tightly and retain compression. Emery is the most satisfactory abrasive for this work. Only the finest grinding powder should be used—nothing coarser than No. 120 emery. Put a small quantity of the emery in a tin dish, add two teaspoonfuls of kerosene and a few drops of heavy lubricating oil to give it body and to prevent running. Smear a little of this mixture on the face of the valve and on its seat, insert the blade of a screw driver in the slot and rotate the valve on its seat by spinning the handle between the palms.

Finally, surprise your engine by giving it a coat of good engine paint and polish up the brass. Then you are ready to shove the whole outfit overboard.

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